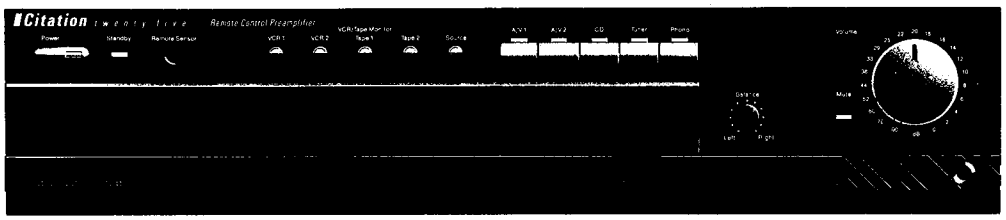
The Harman Kardon Model Citation 25

STEREO PREAMPLIFIER

Manual 129A

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

- (UA) : North America area model
- (G) : General model
- (N) : Japan model

harman/kardon
240 Crossways Park West, Woodbury, N.Y. 11797
1112-3152129A3 P-078801 1500 Printed in Japan

SPECIFICATIONS

	Nominal	Limit
Input Sensitivity/Impedance		
Phono (MM)	2.2mV/47kΩ	
(MC)	125μV/10Ω, 30Ω, 125μV±10μV/56Ω, 100Ω	
Tone amp	130mV/23kΩ	
Ham and Noise Ratio		
Phono (MM)	78dB	≧ 74dB
(MC)	73dB	≧ 69dB
Tone amp	84dB	≧ 80dB
Signal to Noise Ratio (IHF-A)		
Phono (MM)	84dB	≧ 80dB
(MC)	78dB	≧ 74dB
Tone amp	94dB	≧ 90dB
Channel Separation		
Phono (MM)	54dB	≧ 50dB
(MC)	55dB	≧ 50dB
Tone amp	54dB	≧ 50dB
Overload (20 ~ 20kHz)		
Phono (MM)	165mV	≧ 150mV
(MC)	9.2mV	≧ 5mV
THD at 1V Output		
Tone amp (20Hz)	0.0052%	≦ 0.01%
(1kHz)	0.0050%	≦ 0.01%
(20kHz)	0.0045%	≦ 0.01%

	Nominal	Limit
Frequency Response (−3dB Down)	0.25Hz ~ 245kHz	
Subsonic Filter at 20Hz	−3dB ± 1dB	
Tone Control Characteristics		
Bass (400Hz/200Hz)		
Boost	10.5dB/9.5dB ± 1dB	
Cut	−11dB/−9dB ± 1dB	
Treble (2kHz/6kHz)		
Boost	9dB/4.5dB ± 1dB	
Cut	−9dB/−4.5dB ± 1dB	
Dimensions (W x H x D)	17-3/8" x 3-3/8" x 14-5/8" (443 x 85 x 371 mm)	
Weight	20 lbs. / 9.09kg	
Power Supply		
North America area model	AC120V, 60Hz	
General model	AC220/240V, 50/60Hz	
Japan model	AC100V, 50/60Hz	
Power Consumption	27W	
Japan model	24W	

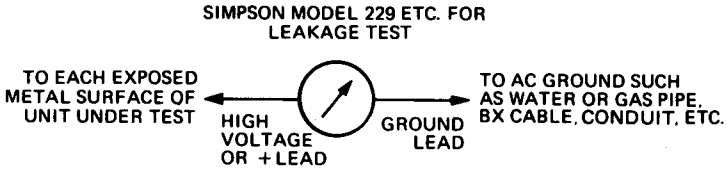
These specifications are Service target specs.

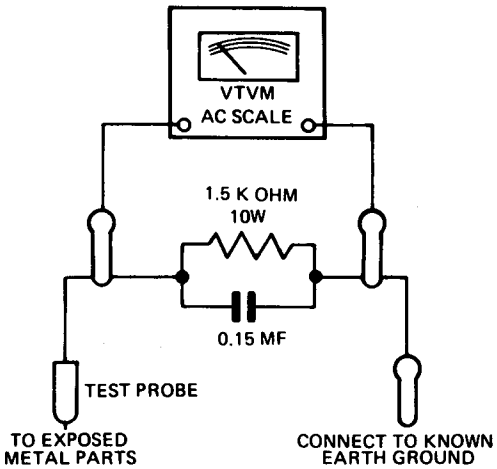
Specifications and components subject to change without notice. Overall performance will be maintained or improved.

LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A.)

Before returning the unit to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
2. Replace all protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows:


SIMPSON MODEL 229 ETC. FOR LEAKAGE TEST
TO EACH EXPOSED METAL SURFACE OF UNIT UNDER TEST
HIGH VOLTAGE OR +LEAD
GROUND LEAD
TO AC GROUND SUCH AS WATER OR GAS PIPE, BX CABLE, CONDUIT, ETC.



Plug the AC line cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 ohm, 10-watt resistor paralleled by a 0.15μF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.) A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.

DISASSEMBLY PROCEDURES (REFER TO PAGES 5 THROUGH 8)

1 CABINET TOP REMOVAL

Remove 6 screws (A) and then remove the Cabinet Top (131).

2 FRONT PANEL ASS'Y (AA) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step 1.
2. Remove 5 screws (B) and then remove the Front Panel Ass'y (AA).

3 FRONT CHASSIS REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step 2.
2. Open the lid of connector (CN713) on the Equalizer P.C. Board (PCB-1) and then disconnect the lead wire.
3. Remove 2 screws (C) and then remove the Record Output (Sub) P.C. Board (PCB-8).
4. Open the lid of connectors (CN701, CN702, CN708, CN709 and CN712) on the Equalizer P.C. Board (PCB-1) and connector (CN706) on the Volume P.C. Board (PCB-3) and then disconnect the lead wires.
5. Unsolder the lead wires and jumper lead from the Equalizer P.C. Board (PCB-1).
6. Pull off Volume, Balance, Treble, Bass and Turnover knobs (142, 147 and 149).
7. Remove 3 nuts (D) and 11 screws (E) and then remove the Volume Control P.C. Board (PCB-3) and the Front Chassis (161) with the Headphone Jack P.C. Board (PCB-2), Function Switch P.C. Board (PCB-4), Mute Indicator P.C. Board (PCB-5), Record Output (Main) P.C. Board (PCB-9) and Power Indicator P.C. Board (PCB-11).

4 TONE CONTROL P.C. BOARD (PCB-6) REMOVAL

1. Remove the Front Chassis (161), referring to the previous step 3.
2. Open the lid of connectors (CN703, CN704, CN706, CN710, CN714 and CN716) on the Tone P.C. Board (PCB-6), Equalizer P.C. Board (PCB-1) and Volume P.C. Board (PCB-3) and then disconnect the lead wires.
3. Unsolder the lead wires from the Tone Control P.C. Board (PCB-6).
4. Remove 5 screws (F) and 2 nuts (G) and then remove the Tone Control P.C. Board (PCB-6).

5 EQUALIZER P.C. BOARD (PCB-1) REMOVAL

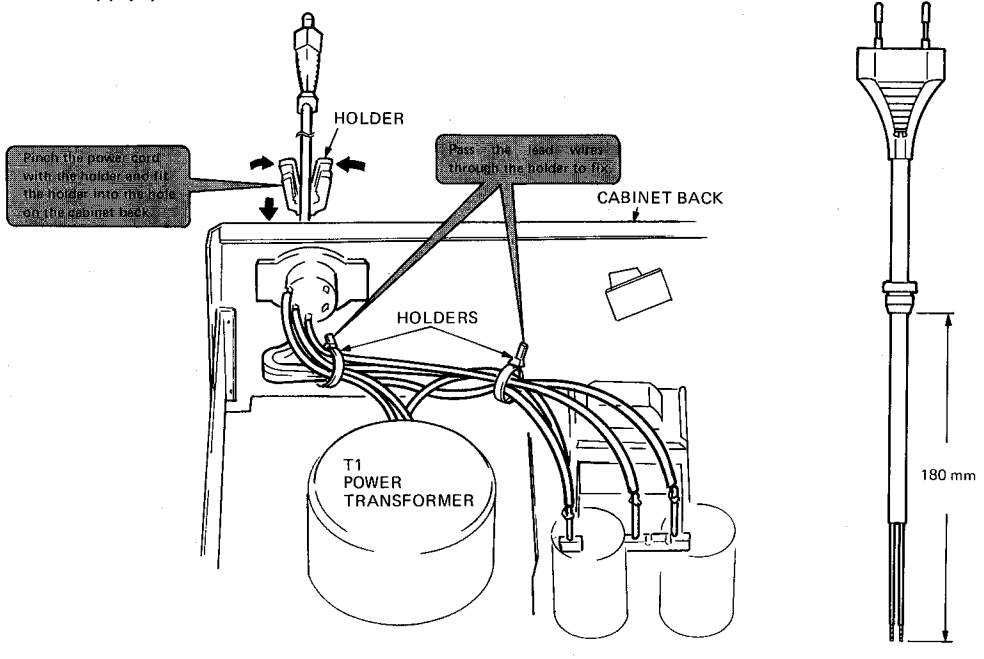
1. Remove the Front Chassis (161), referring to the previous step 3.
2. Open the lid of connectors (CN703, CN704, CN710, CN714 and CN716) on the Tone Control P.C. Board (PCB-6) and connectors (CN701, CN702, CN707, CN708, CN709, CN711, CN712, CN713 and CN715) on the Equalizer P.C. Board (PCB-1) and then disconnect the lead wires.
3. Unsolder the lead wires from the Equalizer P.C. Board (PCB-1).
4. Remove 11 screws (H) and then remove the Equalizer P.C. Board (PCB-1).

6 VIDEO P.C. BOARD (PCB-7) REMOVAL

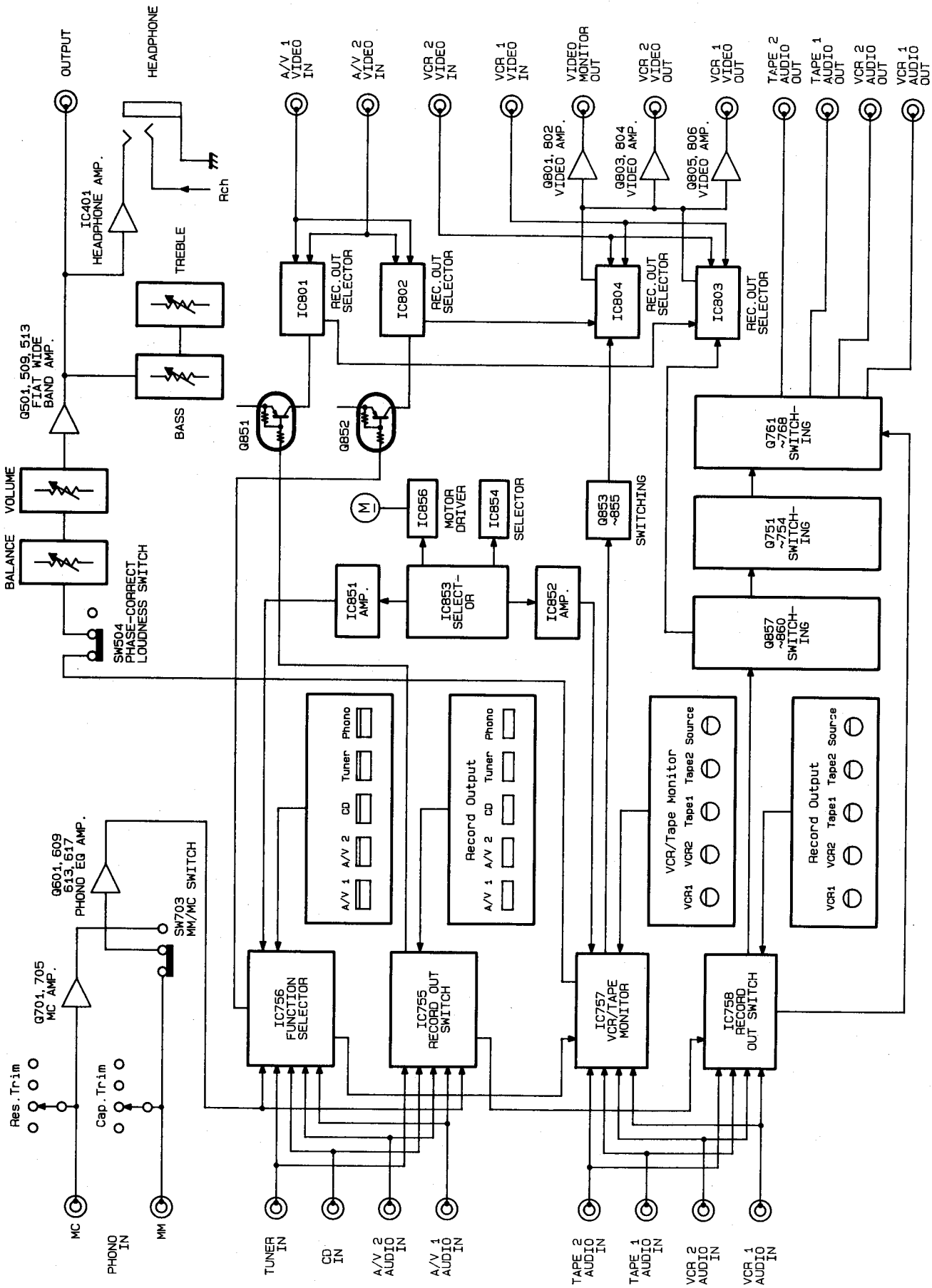
1. Remove the Cabinet Top (131), referring to the previous step 1.
2. Open the lid of connectors (CN707 and CN711) on the Equalizer P.C. Board (PCB-1) and then disconnect the jumper leads.
3. Remove 4 screws (I) an then remove the Video P.C. Board (PCB-7).

POWER CORD REPLACEMENT (FOR SERVICE ENGINEERS OTHER THAN NORTH AMERICA)

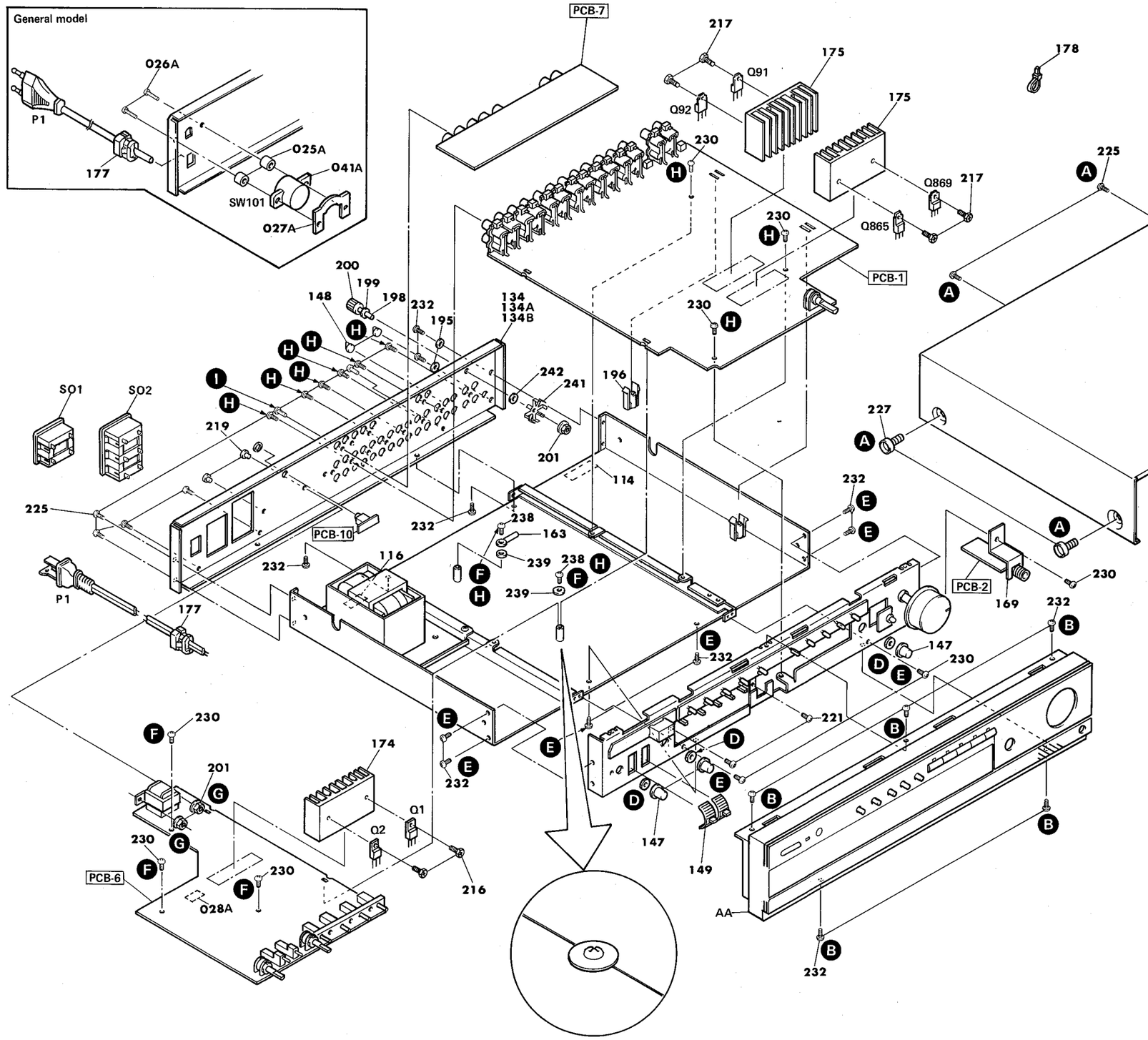
In order to prevent fire or shock hazard when replacing the power cord, follow the Procedure below to replace the part with the standard supply parts.


HOLDER
Pinch the power cord with the holder and fit the holder into the hole on the cabinet back.
Pass the lead wires through the holder to fix.
CABINET BACK
HOLDERS
T1
POWER
TRANSFORMER
180 mm

BLOCK DIAGRAM



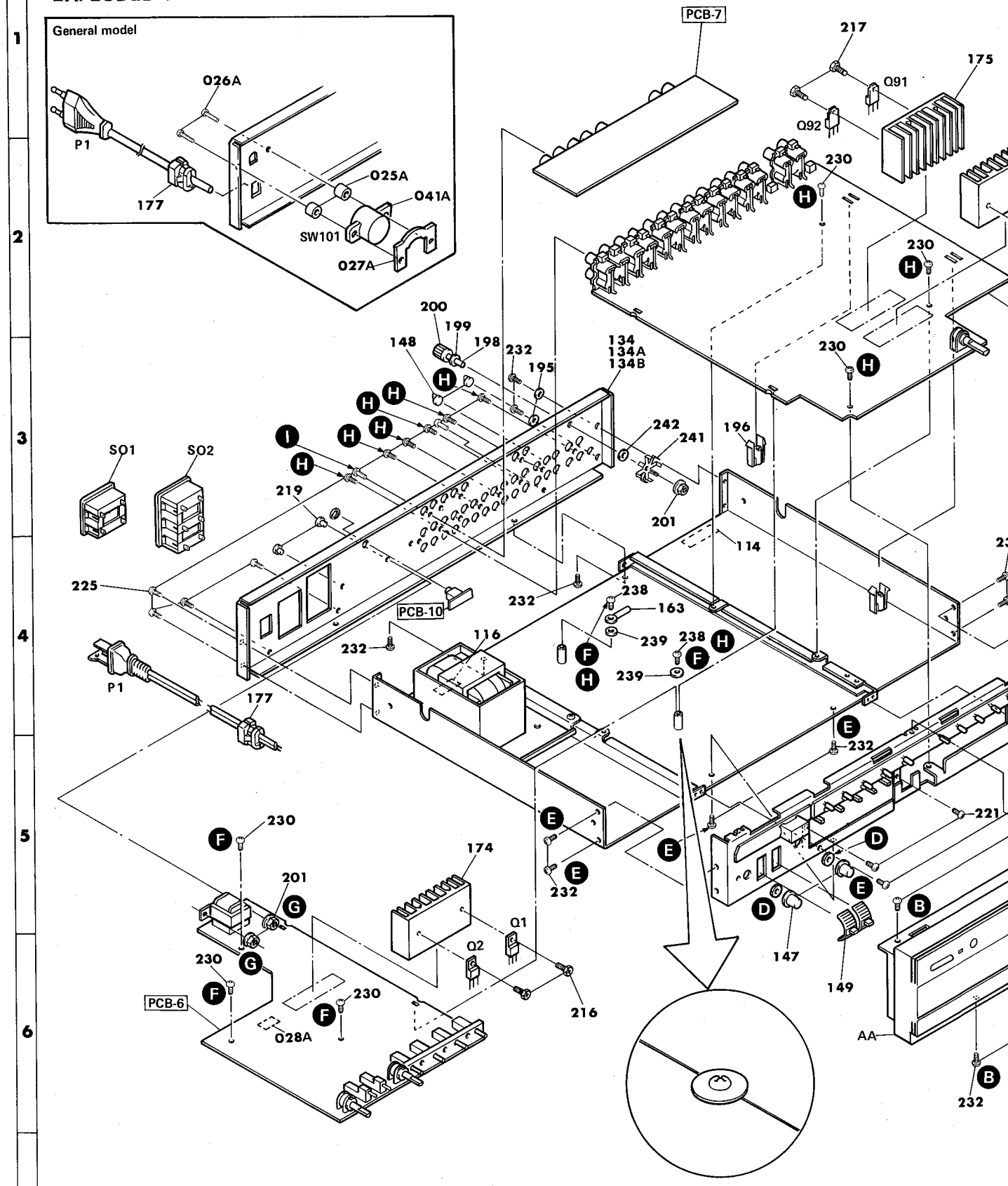
GENERAL UNIT
EXPLODED VIEW



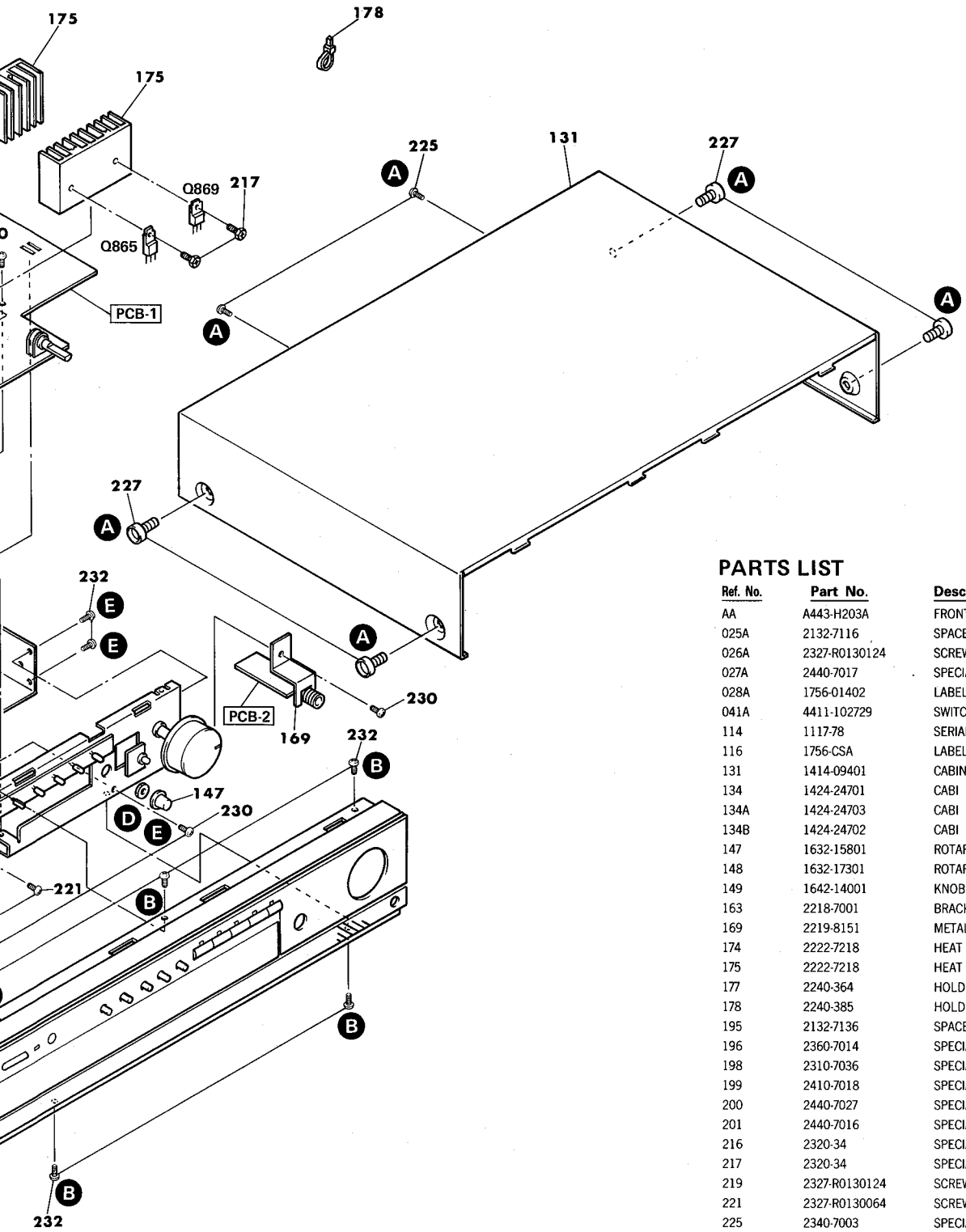
PARTS LIST

Ref. No.	Part No.	Description
AA	A443-H203A	FRONT PANEL ASS'Y (G)
025A	2132-7116	SPACER (G)
026A	2327-R0130124	SCREW (G)
027A	2440-7017	SPECIAL NUT (G)
028A	1756-01402	LABEL (G)
041A	4411-102729	SWITCH ROTALY (G)
114	1117-78	SERIAL LABEL, REAR
116	1756-CSA	LABEL (UA)
131	1414-09401	CABINET TOP
134	1424-24701	CABI BACK, REAR (UA)
134A	1424-24703	CABI BACK, REAR (G)
134B	1424-24702	CABI BACK, REAR (N)
147	1632-15801	ROTARY KNOB
148	1632-17301	ROTARY KNOB
149	1642-14001	KNOB
163	2218-7001	BRACKET, FIX
169	2219-8151	METAL FITTG, HEAD PHONE
174	2222-7218	HEAT SINK
175	2222-7218	HEAT SINK
177	2240-364	HOLDER, AC CORD
178	2240-385	HOLDER, WIRING
195	2132-7136	SPACER
196	2360-7014	SPECIAL BOSS
198	2310-7036	SPECIAL SCREW
199	2410-7018	SPECIAL WASHER
200	2440-7027	SPECIAL NUT
201	2440-7016	SPECIAL NUT
216	2320-34	SPECIAL SCREW
217	2320-34	SPECIAL SCREW
219	2327-R0130124	SCREW
221	2327-R0130064	SCREW
225	2340-7003	SPECIAL SCREW
227	2340-7008	SPECIAL SCREW, TOP COVER
230	2347-R0130064	SCREW
232	2347-R0130084	SCREW, BOTTOM
238	2327-R0130084	SCREW
239	2401-0320	WASHER, METAL
241	4211-5006	LUG, GND
242	2414-402	WASHER

GENERAL UNIT
EXPLODED VIEW



	F	G	H	I	J



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134A	1424-24703	CABI BACK, REAR (G)
134B	1424-24702	CABI BACK, REAR (N)
147	1632-15801	ROTARY KNOB
148	1632-17301	ROTARY KNOB
149	1642-14001	KNOB
163	2218-7001	BRACKET, FIX
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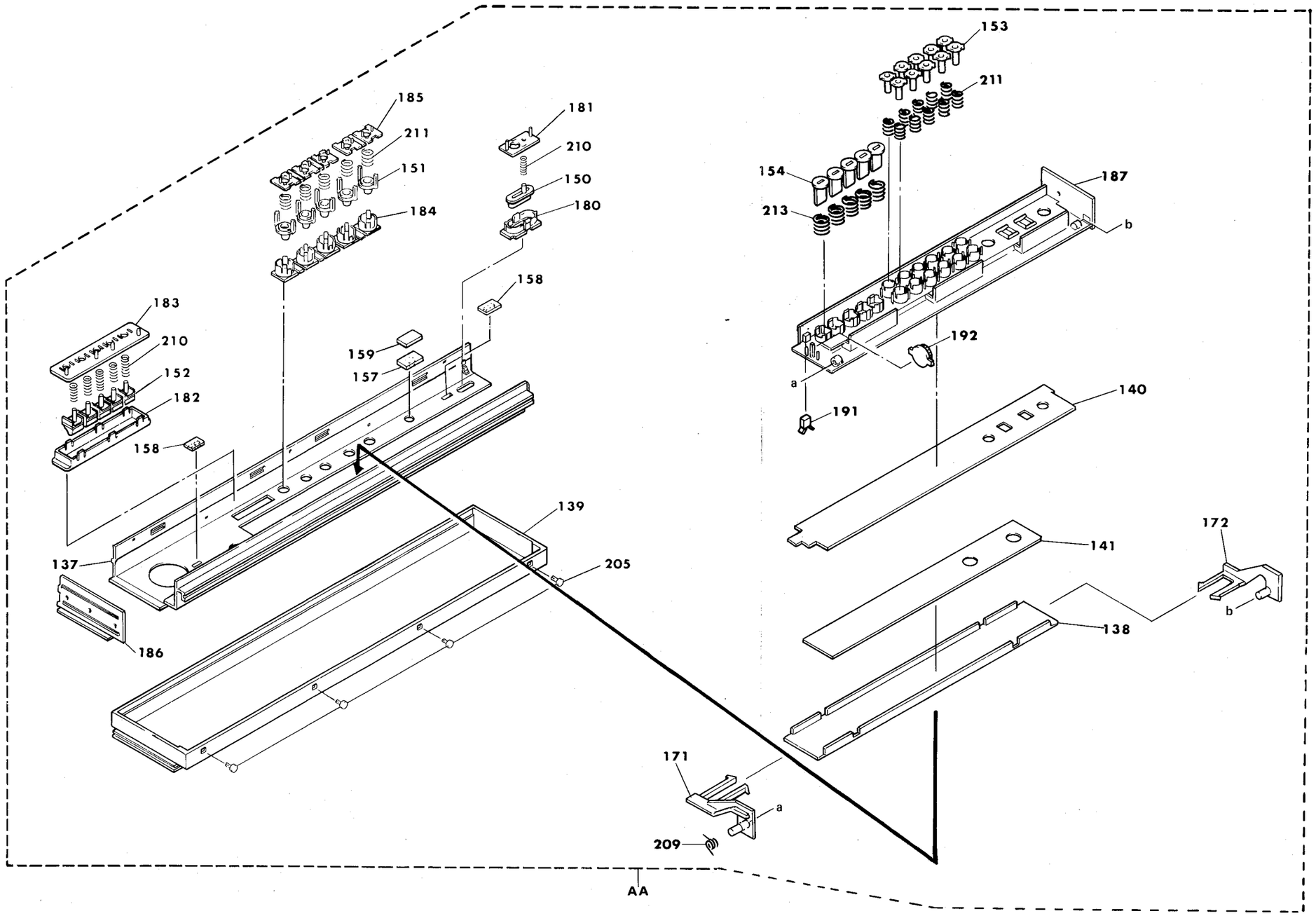
199	2410-7018	SPECIAL WASHER
200	2440-7027	SPECIAL NUT
201	2440-7016	SPECIAL NUT
216	2320-34	SPECIAL SCREW
217	2320-34	SPECIAL SCREW
219	2327-R0130124	SCREW
221	2327-R0130064	SCREW
225	2340-7003	SPECIAL SCREW
227	2340-7008	SPECIAL SCREW, TOP COVER
230	2347-R0130064	SCREW
232	2347-R0130084	SCREW, BOTTOM
238	2327-R0130084	SCREW
239	2401-0320	WASHER, METAL
241	4211-5006	LUG, GND
242	2414-402	WASHER

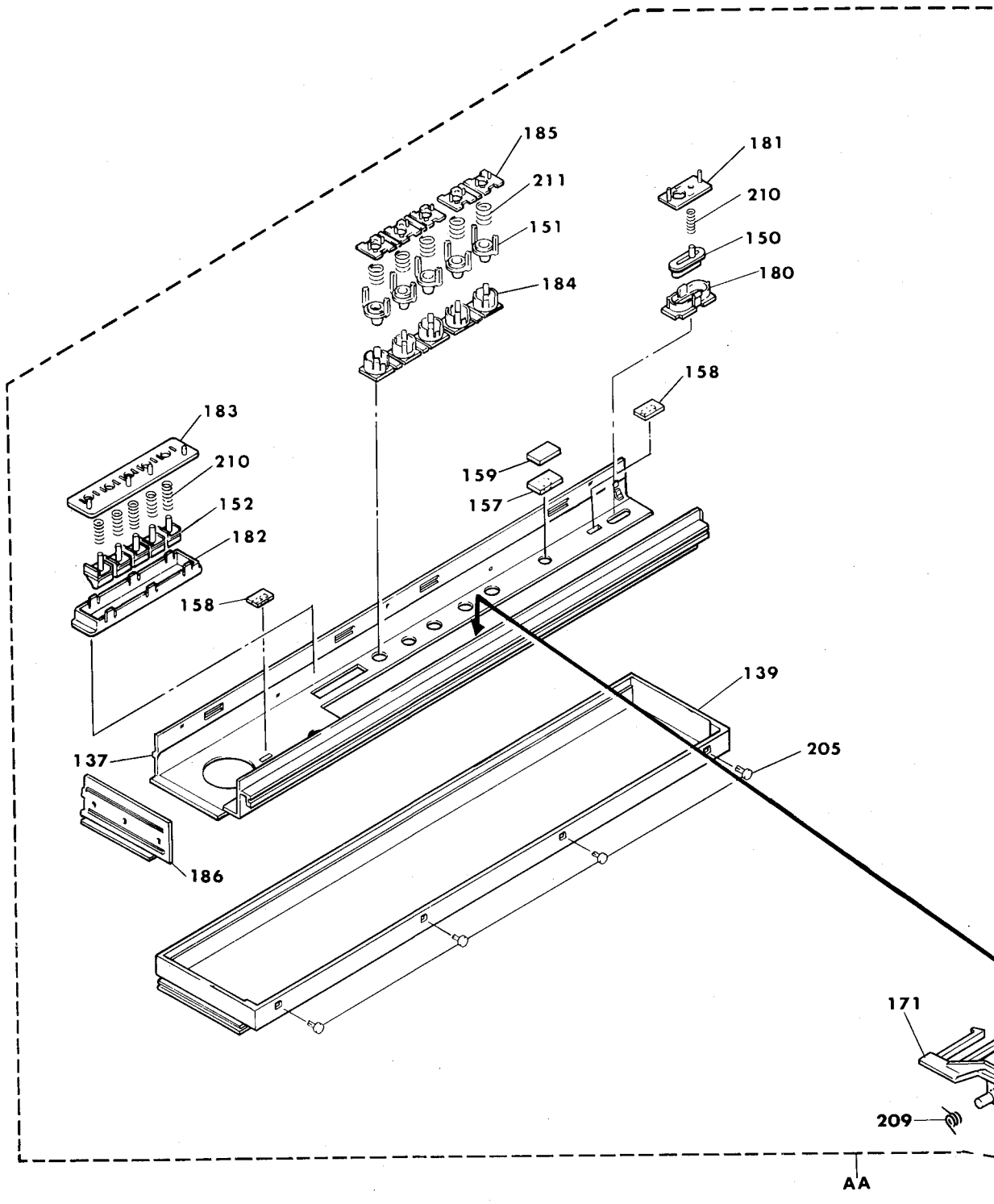
GENERAL UNIT
EXPLODED VIEW (FRONT PANEL ASS'Y)

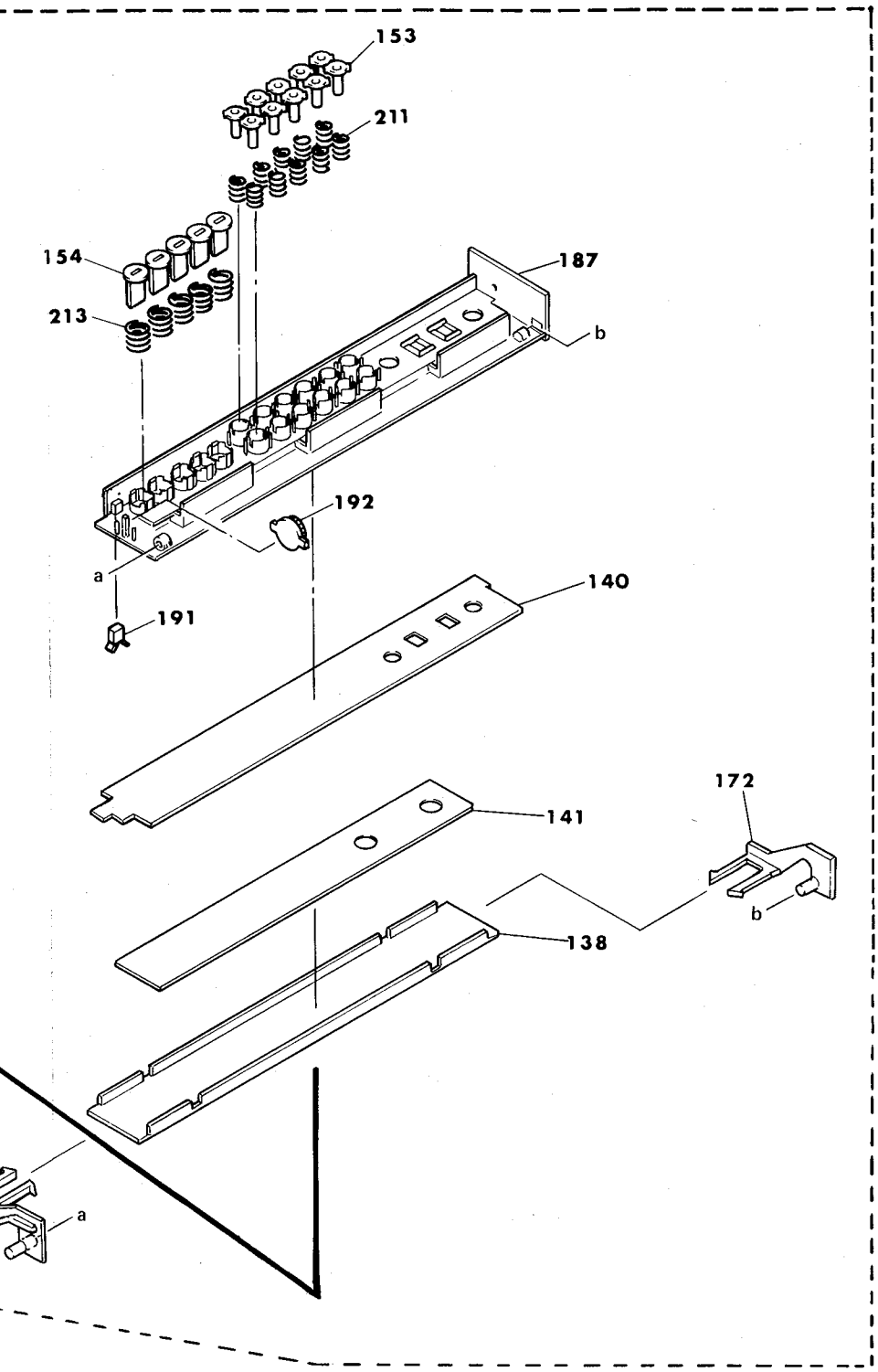


PARTS LIST

Ref. No.	Part No.	Description
AA	A443-H203A	FRONT PANEL ASS'Y
137	1443-12201	PANEL
138	1453-00901	LID
139	1562-06501	FRAME
140	1721-08501	INDICATOR PLATE
141	1721-08601	INDICATOR PLATE
150	1662-30401	PUSH BUTTON, POWER
151	1662-30701	PUSH BUTTON
152	1662-30801	PUSH BUTTON
153	1662-30901	PUSH BUTTON
154	1662-30501	PUSH BUTTON
157	1532-14501	WINDOW
158	1732-03601	INDICATOR
159	1511-06304	PLATE
171	2221-102	HINGE
172	2221-103	HINGE
180	2240-7290	HOLDER, POWER
181	2240-7291	HOLDER, POWER
182	2240-7300	HOLDER, FUNCTION
183	2240-7301	HOLDER, FUNCTION
184	2240-7302	HOLDER
185	2240-7303	HOLDER
186	2240-7306	HOLDER
187	2240-7334	HOLDER
191	2430-7008	SPECIAL FASTENER
192	2692-13	DAMPER
205	2459-3005511	PLASTIC RIVET
209	2651-006	SPRING
210	2651-2101727	SPRING
211	2651-2101710	SPRING
213	2651-2101728	SPRING

GENERAL UNIT
EXPLODED VIEW (FRONT PANEL ASS'Y)





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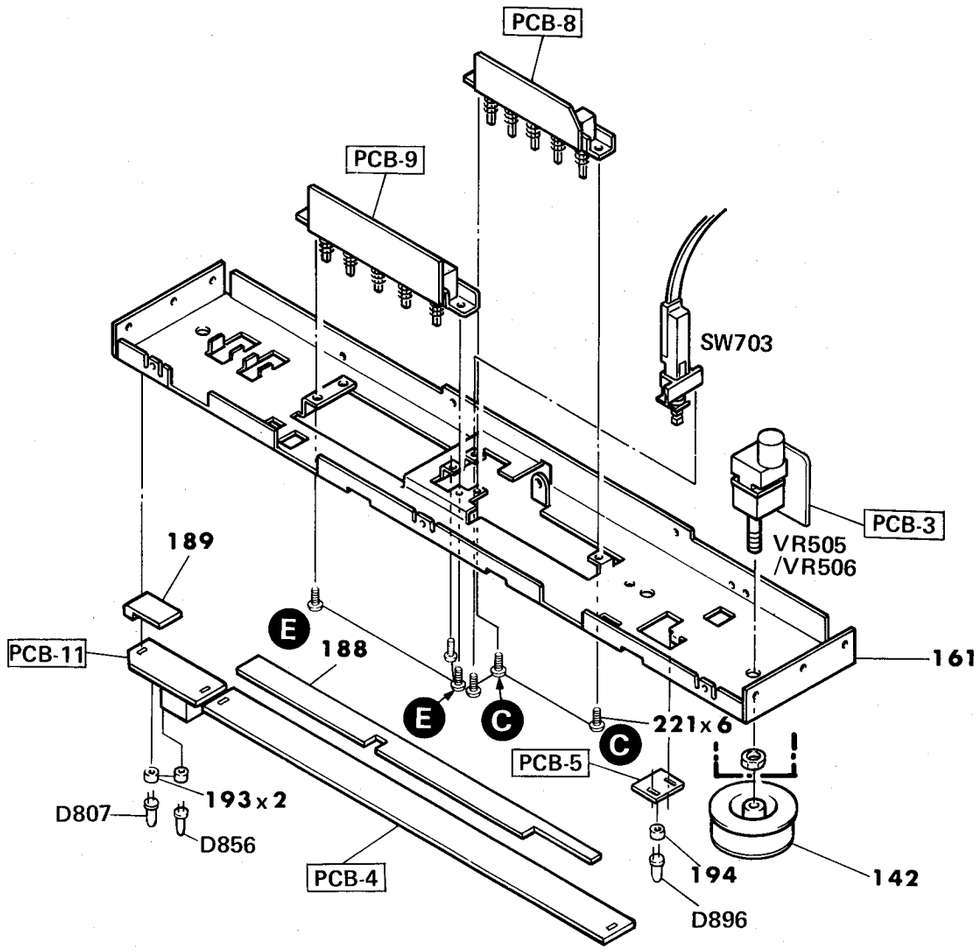
141	1721-08601	INDICATOR PLATE
150	1662-30401	PUSH BUTTON, POWER
151	1662-30701	PUSH BUTTON
152	1662-30801	PUSH BUTTON
153	1662-30901	PUSH BUTTON
154	1662-30501	PUSH BUTTON
157	1532-14501	WINDOW
158	1732-03601	INDICATOR
159	1511-06304	PLATE
171	2221-102	HINGE
172	2221-103	HINGE
180	2240-7290	HOLDER, POWER
181	2240-7291	HOLDER, POWER
182	2240-7300	HOLDER, FUNCTION
183	2240-7301	HOLDER, FUNCTION
184	2240-7302	HOLDER
185	2240-7303	HOLDER
186	2240-7306	HOLDER
187	2240-7334	HOLDER
191	2430-7008	SPECIAL FASTENER
192	2692-13	DAMPER
205	2459-3005511	PLASTIC RIVET
209	2651-006	SPRING
210	2651-2101727	SPRING
211	2651-2101710	SPRING
213	2651-2101728	SPRING

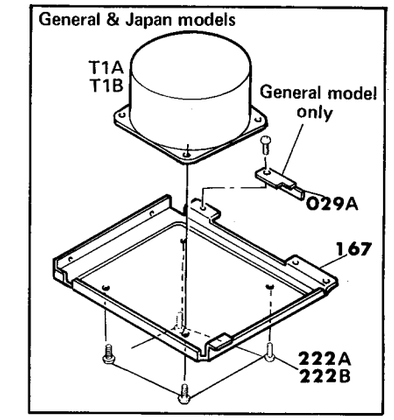
GENERAL UNIT
EXPLODED VIEW (FRONT CHASSIS)

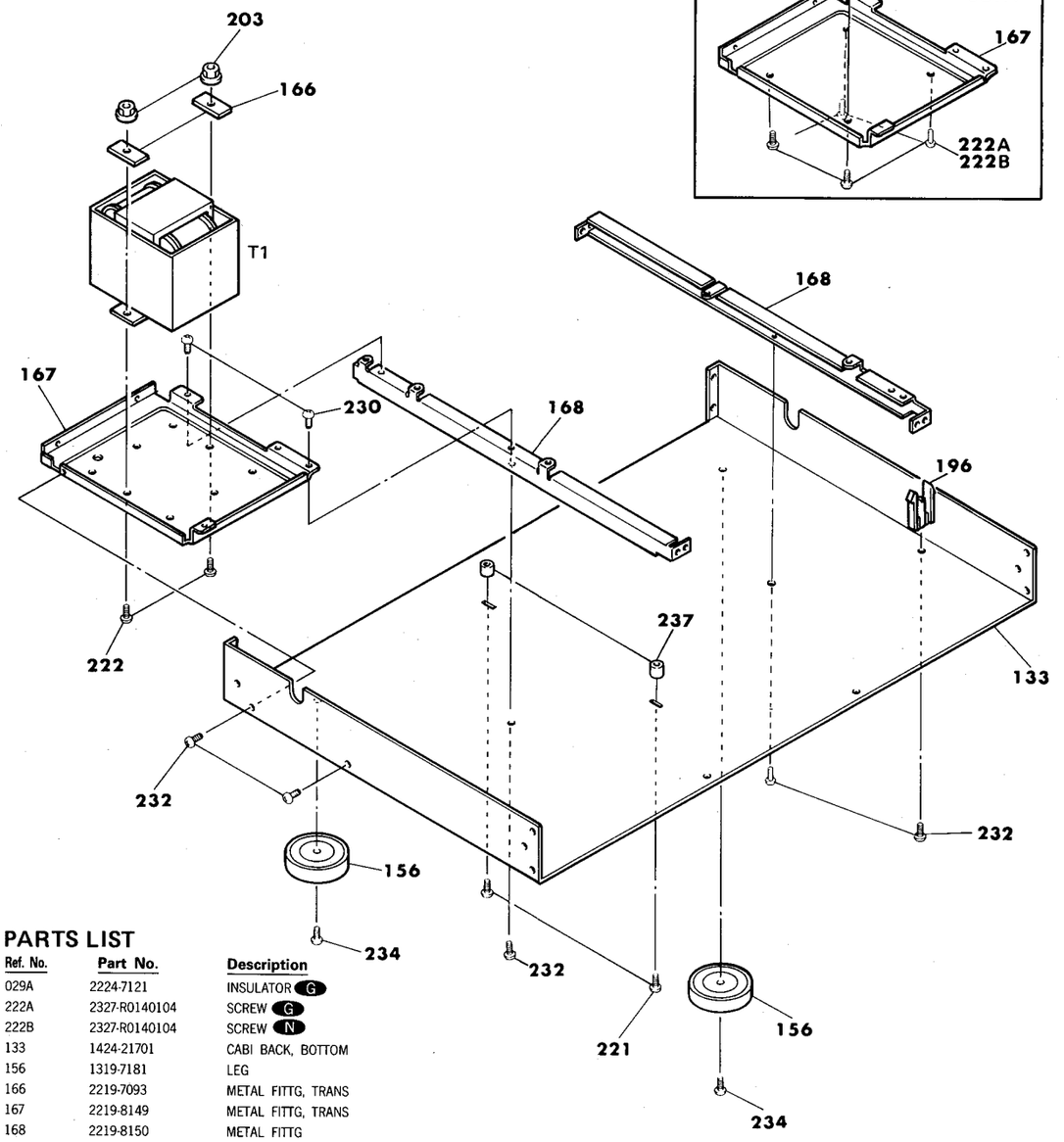


PARTS LIST

Ref. No.	Part No.	Description
142	1630-03501	ROTARY KNOB, VOLUME
161	2211-7299	CHASSIS
188	2240-7336	HOLDER
189	2240-7338	HOLDER
193	2132-7119	SPACER
194	2132-7119	SPACER
221	2327-R0130064	SCREW

GENERAL UNIT
EXPLODED VIEW (CABINET BOTTOM)

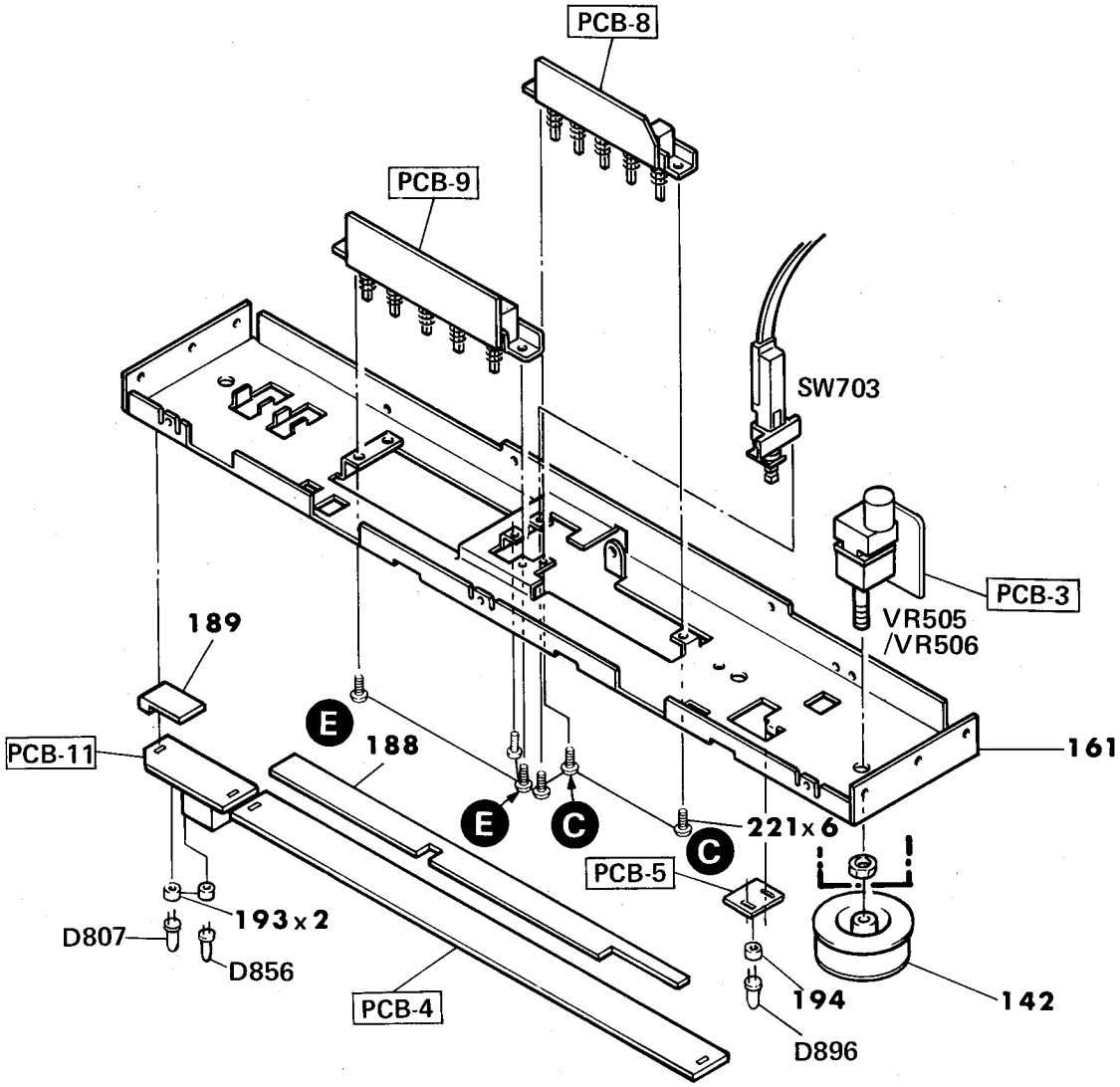




PARTS LIST

Ref. No.	Part No.	Description
029A	2224-7121	INSULATOR (G)
222A	2327-R0140104	SCREW (G)
222B	2327-R0140104	SCREW (N)
133	1424-21701	CABI BACK, BOTTOM
156	1319-7181	LEG
166	2219-7093	METAL FITTG, TRANS
167	2219-8149	METAL FITTG, TRANS
168	2219-8150	METAL FITTG
196	2360-7014	SPECIAL BOSS
203	2440-7019	SPECIAL NUT
221	2327-R0130064	SCREW
222	2327-R0140104	SCREW
230	2347-R0130064	SCREW
232	2347-R0130084	SCREW
234	2347-R0140124	SCREW
237	2362-10101	BOSS, THREAD
⚠T1	5584-701554	XFORMER, POWER (UA)
⚠T1A	5584-702453	XFORMER, POWER (G)
⚠T1B	5584-703453	XFORMER, POWER (N)

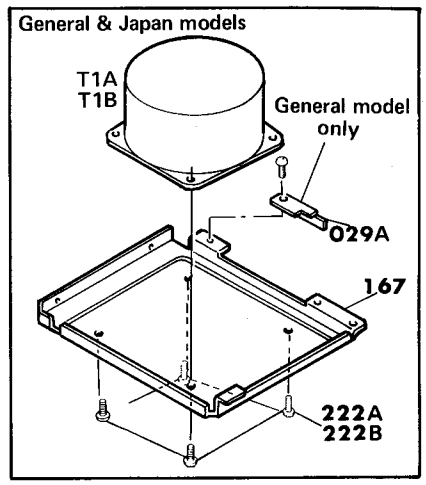
GENERAL UNIT
EXPLODED VIEW (FRONT CHASSIS)

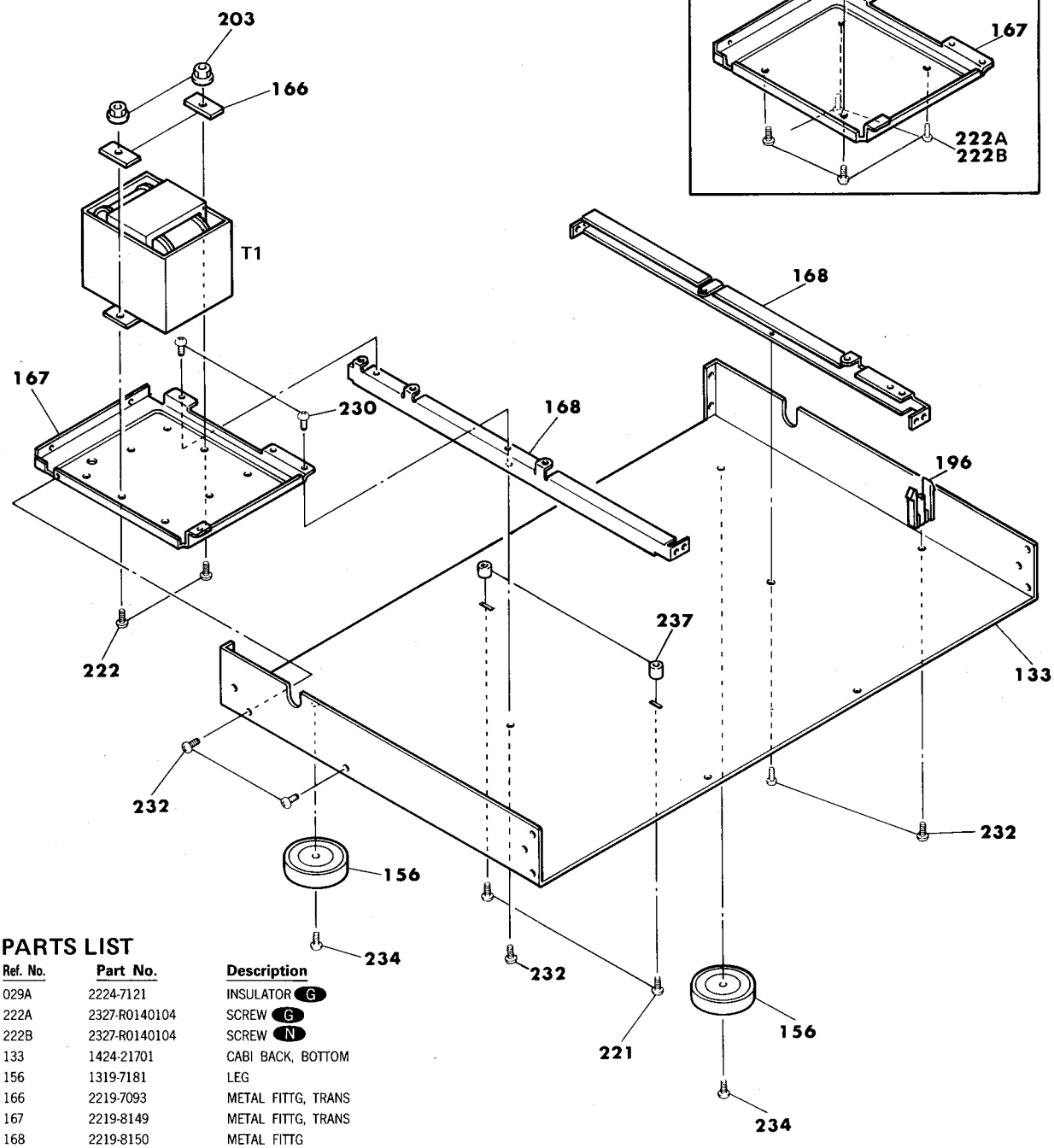


PARTS LIST

Ref. No.	Part No.	Description
142	1630-03501	ROTARY KNOB, VOLUME
161	2211-7299	CHASSIS
188	2240-7336	HOLDER
189	2240-7338	HOLDER
193	2132-7119	SPACER
194	2132-7119	SPACER
221	2327-R0130064	SCREW

GENERAL UNIT
EXPLODED VIEW (CABINET BOTTOM)

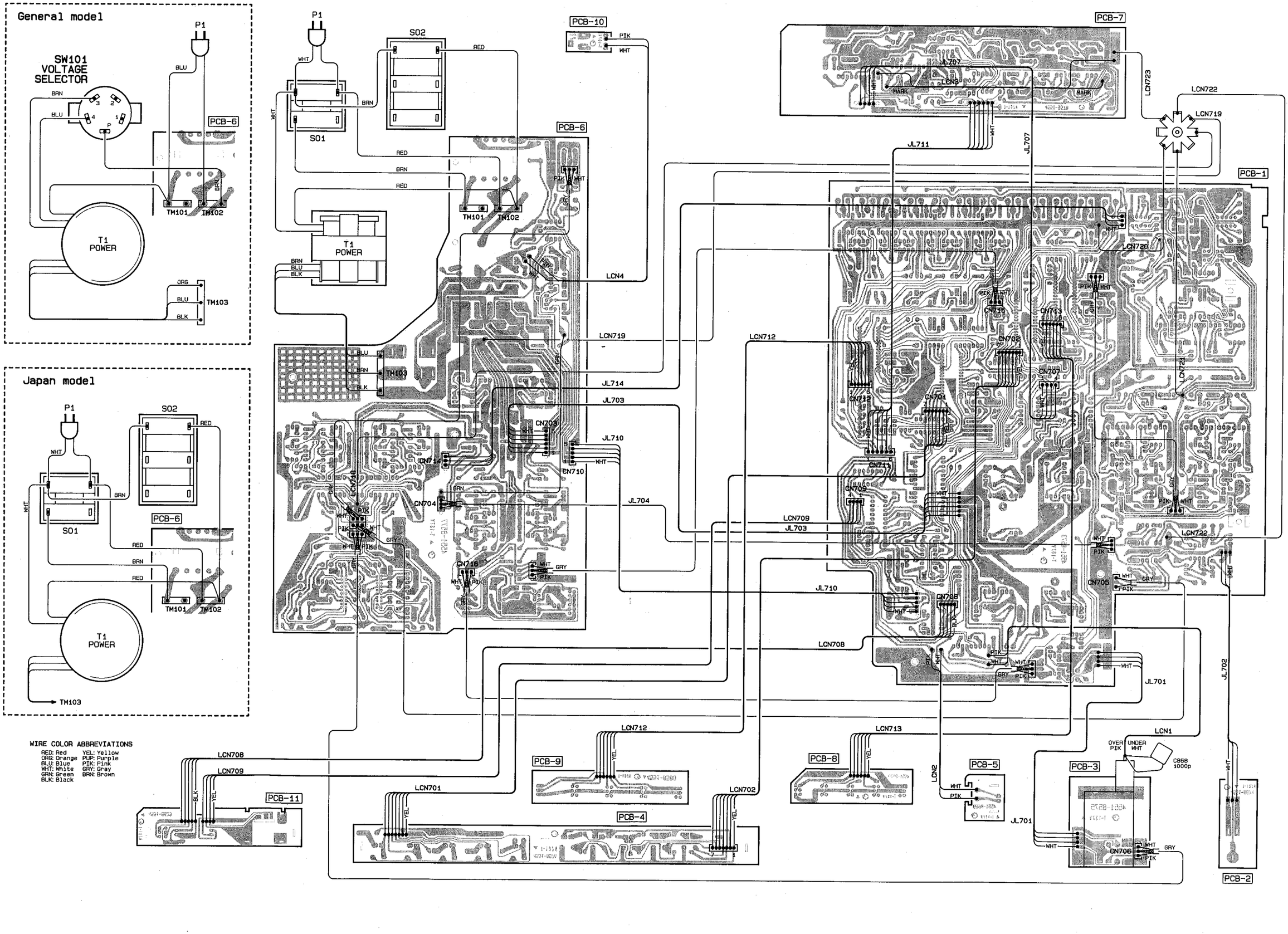




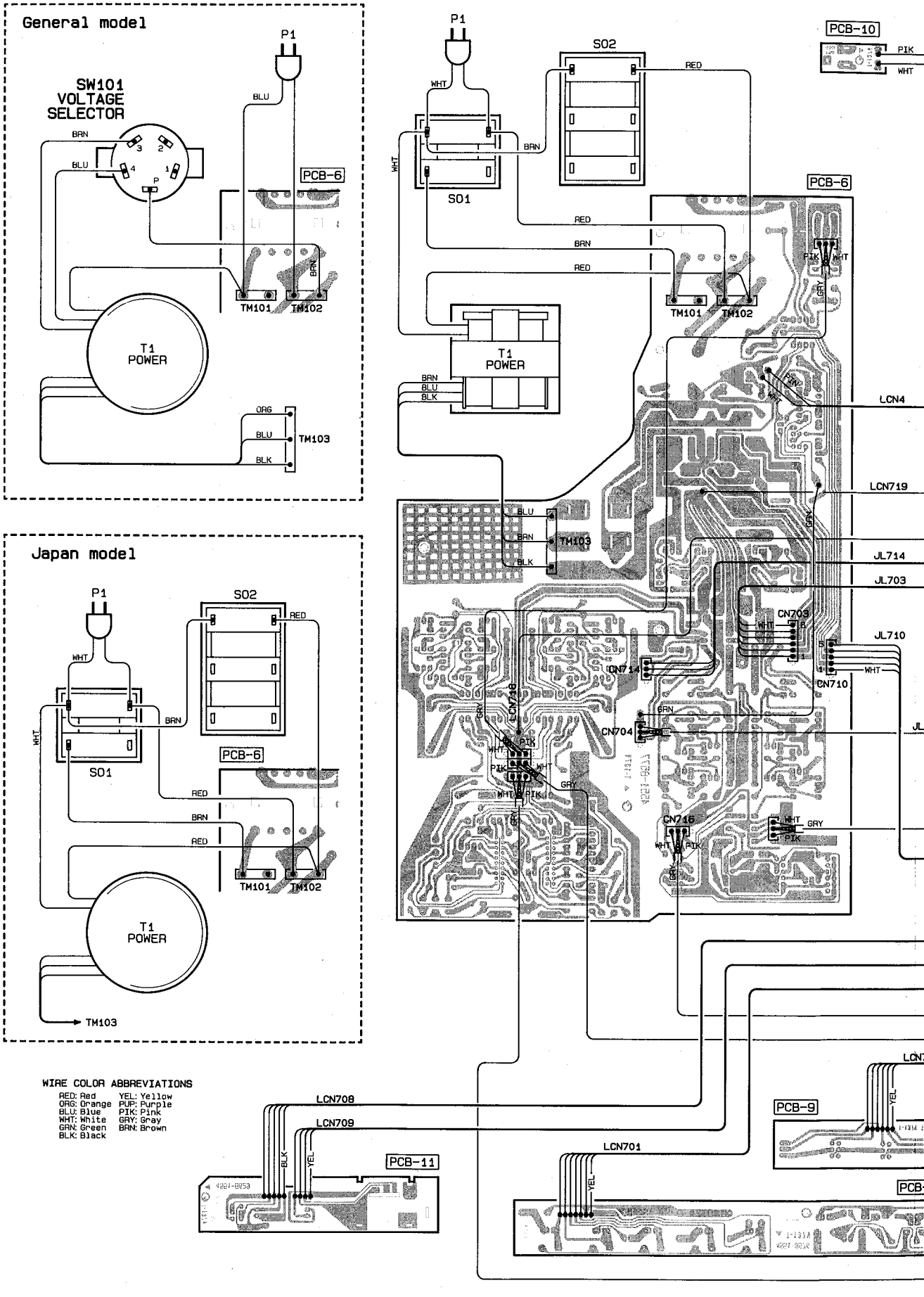
PARTS LIST

Ref. No.	Part No.	Description
029A	2224-7121	INSULATOR (G)
222A	2327-R0140104	SCREW (G)
222B	2327-R0140104	SCREW (N)
133	1424-21701	CABI BACK, BOTTOM
156	1319-7181	LEG
166	2219-7093	METAL FITTG, TRANS
167	2219-8149	METAL FITTG, TRANS
168	2219-8150	METAL FITTG
196	2360-7014	SPECIAL BOSS
203	2440-7019	SPECIAL NUT
221	2327-R0130064	SCREW
222	2327-R0140104	SCREW
230	2347-R0130064	SCREW
232	2347-R0130084	SCREW
234	2347-R0140124	SCREW
237	2362-10101	BOSS, THREAD
⚠T1	5584-701554	XFORMER, POWER (UA)
⚠T1A	5584-702453	XFORMER, POWER (G)
⚠T1B	5584-703453	XFORMER, POWER (N)

WIRING DIAGRAM



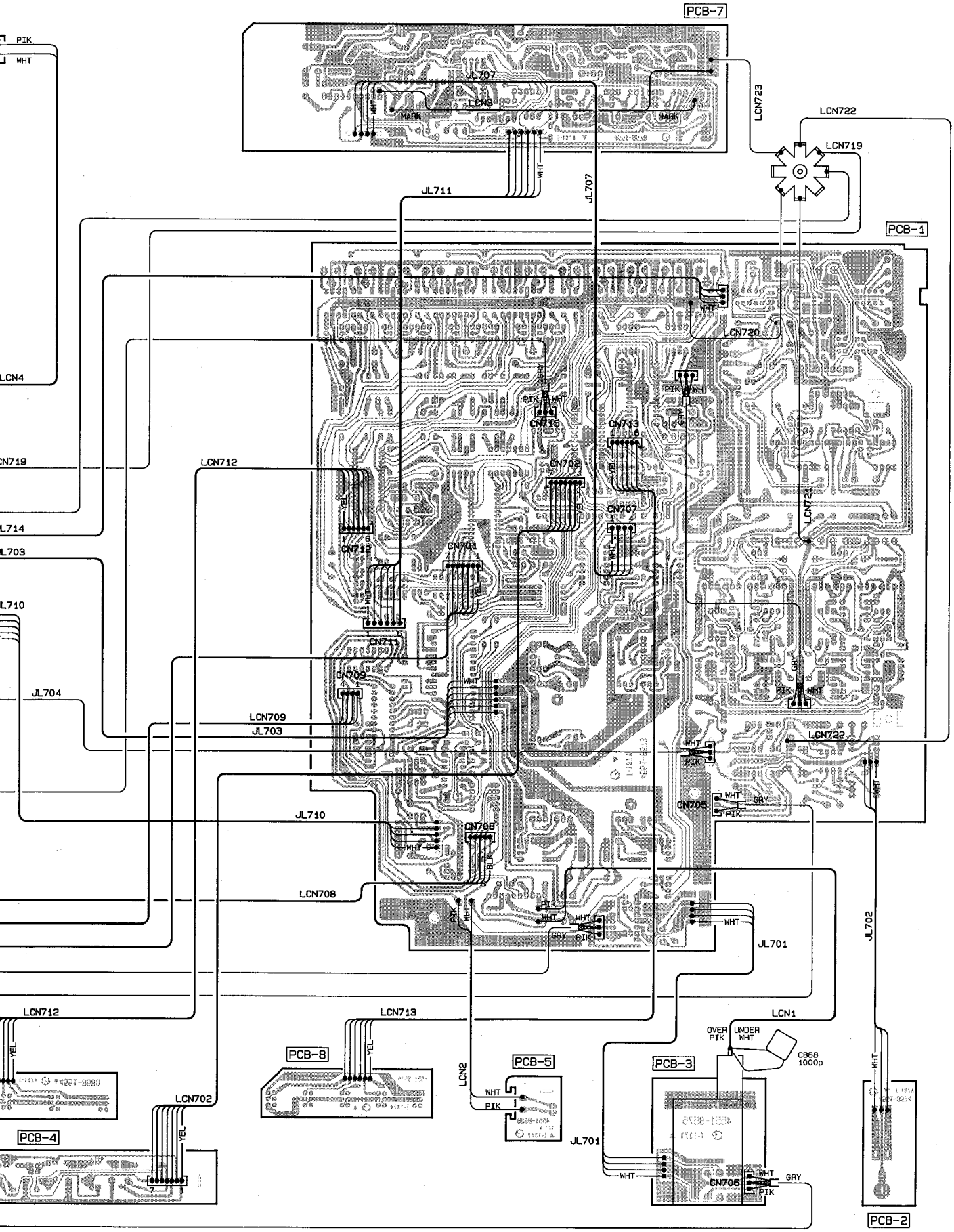
WIRING DIAGRAM



WIRE COLOR ABBREVIATIONS

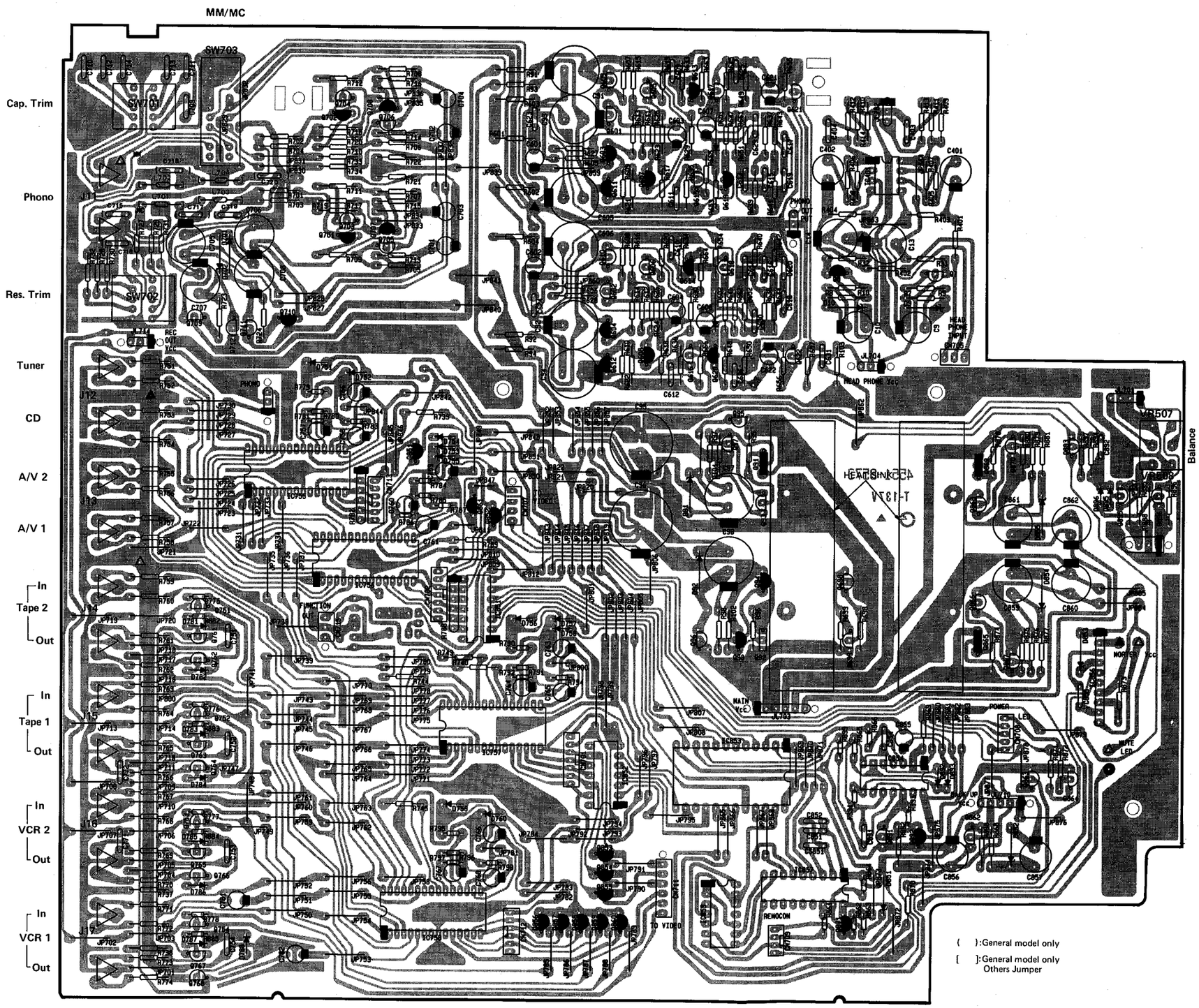
RED: Red	YEL: Yellow
ORG: Orange	PUP: Purple
BLU: Blue	PIK: Pink
WHT: White	GRY: Gray
GRN: Green	BRN: Brown
BLK: Black	

F G H I J

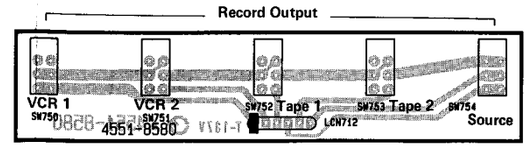

PCB-7
JL707
LCN3
MARK
MARK
WHT
WHT
JL711
JL707
LCN723
LCN722
LCN719
PCB-1
LCN720
WHT
PIK
WHT
GRY
CN716
CN713
CN702
YEL
CN707
WHT
LCN721
LCN712
YEL
CN712
CN701
YEL
WHT
CN711
CN709
WHT
JL704
LCN709
JL703
LCN722
WHT
PIK
WHT
GRY
CN705
PIK
JL710
CN708
WHT
BLK
LCN708
PIK
WHT
PIK
WHT
WHT
GRY
PIK
JL701
JL702
WHT
LCN712
YEL
LCN713
YEL
PCB-8
LCN2
PCB-5
WHT
PIK
JL701
PCB-3
OVER
PIK
UNDER
WHT
LCN1
CB68
1000p
WHT
WHT
GRY
CN706
PIK
PCB-4
LCN702
YEL
PCB-2
WHT

P.C. BOARDS (1)

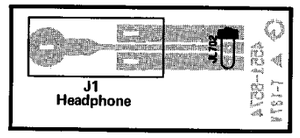
PCB-1 Equalizer P. C. Board



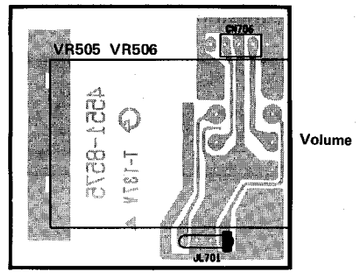
PCB-9 Record Output P. C. Board (MAIN)



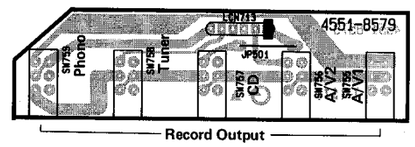
PCB-2 Headphone Jack P. C. Board



PCB-3 Volume Control P. C. Board



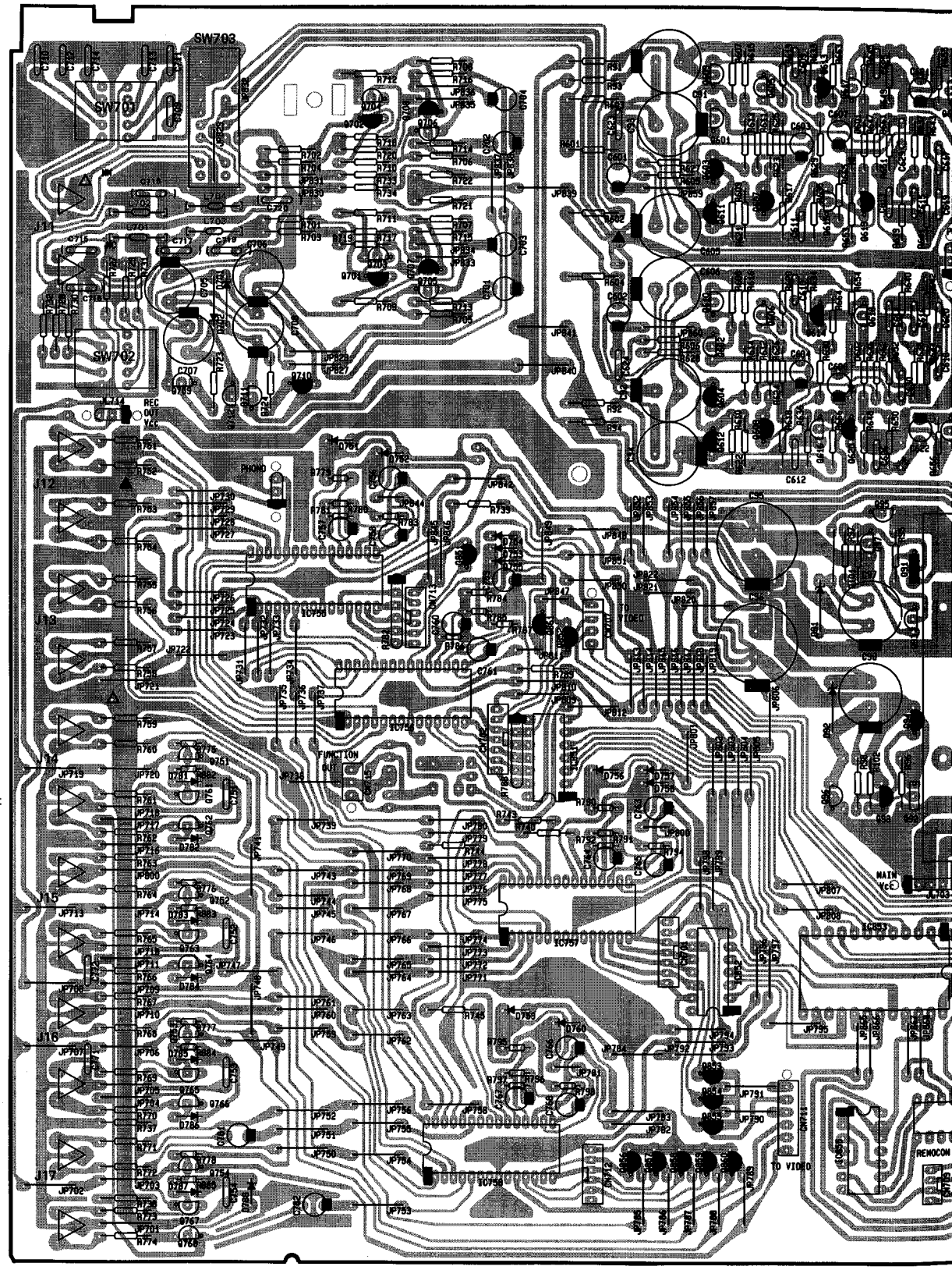
PCB-8 Record Output P. C. Board (SUB)



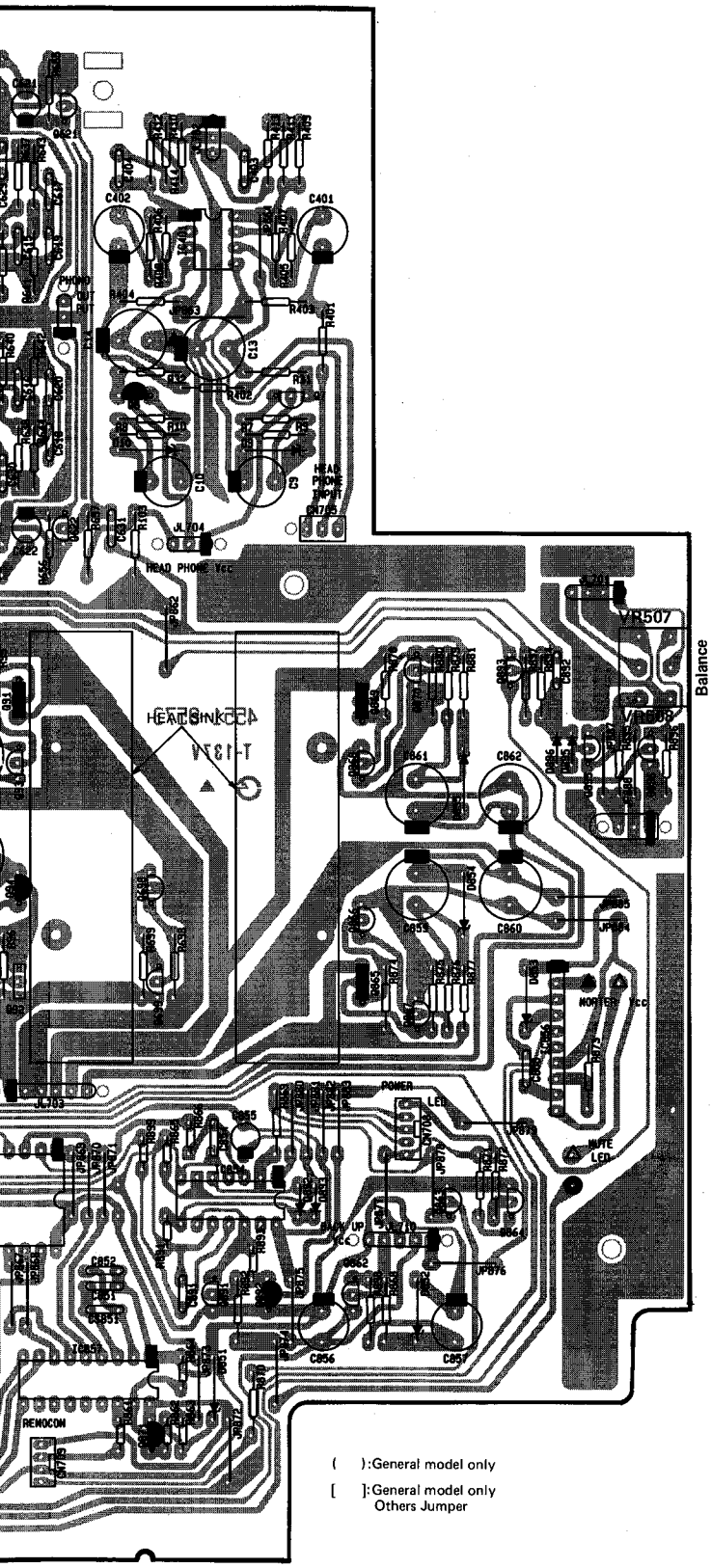
P.C. BOARDS (1)

PCB-1 Equalizer P. C. Board

MM/MC



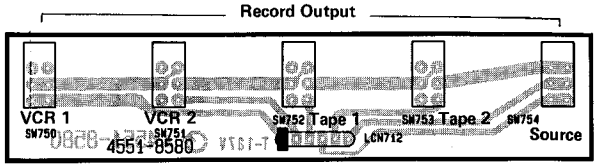
F G H I J



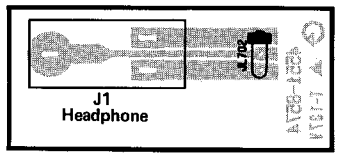
( ):General model only

[ ]:General model only
Others Jumper

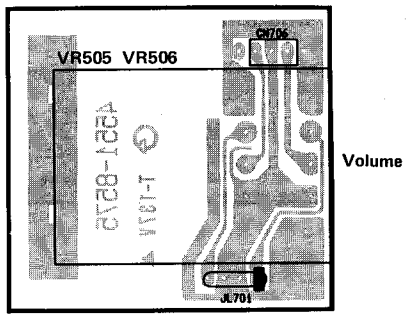
PCB-9 Record Output P. C. Board (MAIN)



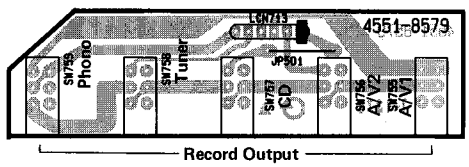
PCB-2 Headphone Jack P. C. Board



PCB-3 Volume Control P. C. Board

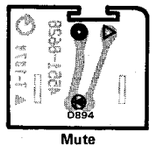


PCB-8 Record Output P. C. Board (SUB)

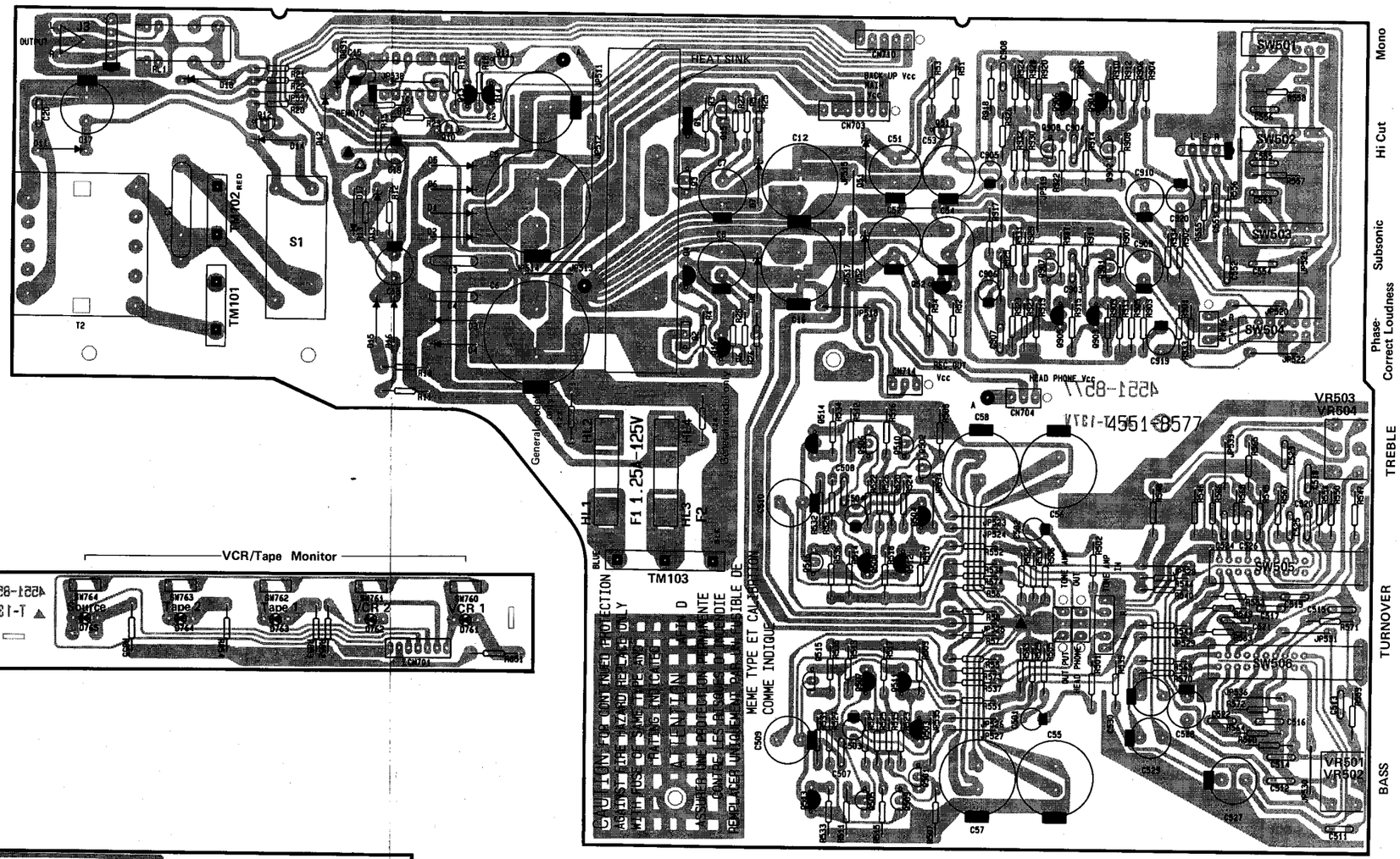


P.C. BOARDS (2)

PCB-5 Mute Indicator P. C. Board

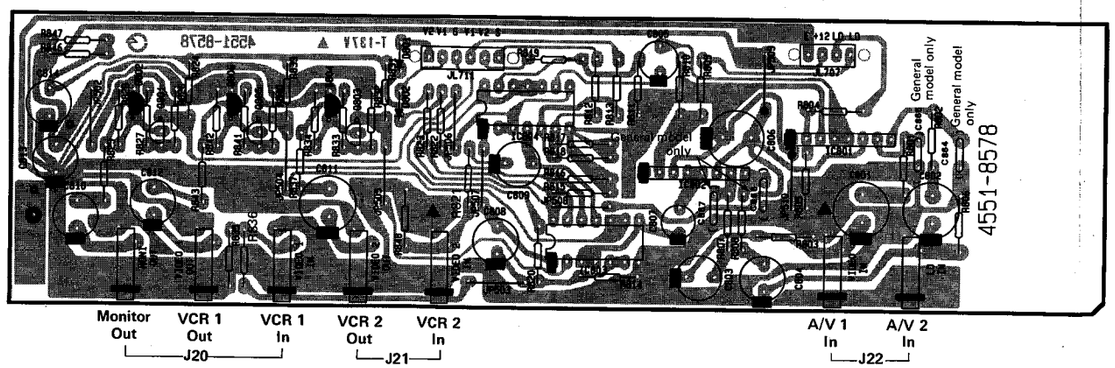


PCB-6 Tone Control P. C. Board



PCB-4 Function Switch P. C. Board

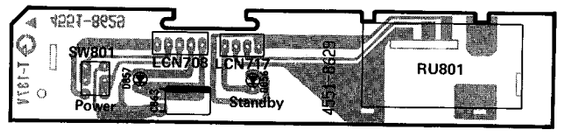
PCB-7 Video P. C. Board



PCB-10 Mini Jack P. C. Board

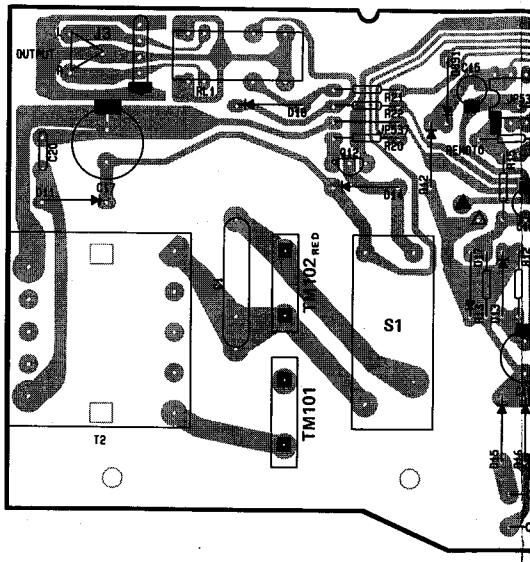
Remote Power On

PCB-11 Power Indicator P. C. Board

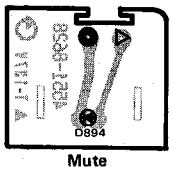


P.C. BOARDS (2)

PCB-6 Tone Control P. C. Board

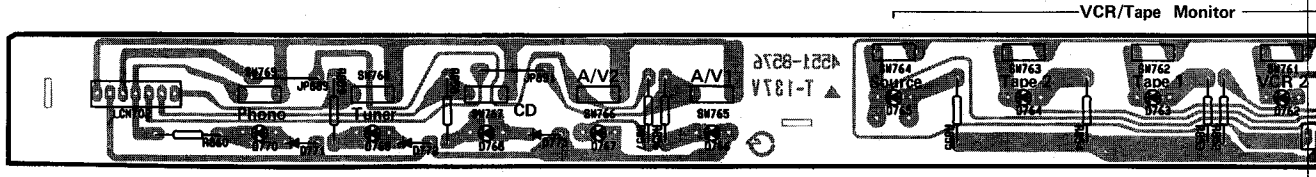


PCB-5 Mute Indicator P. C. Board

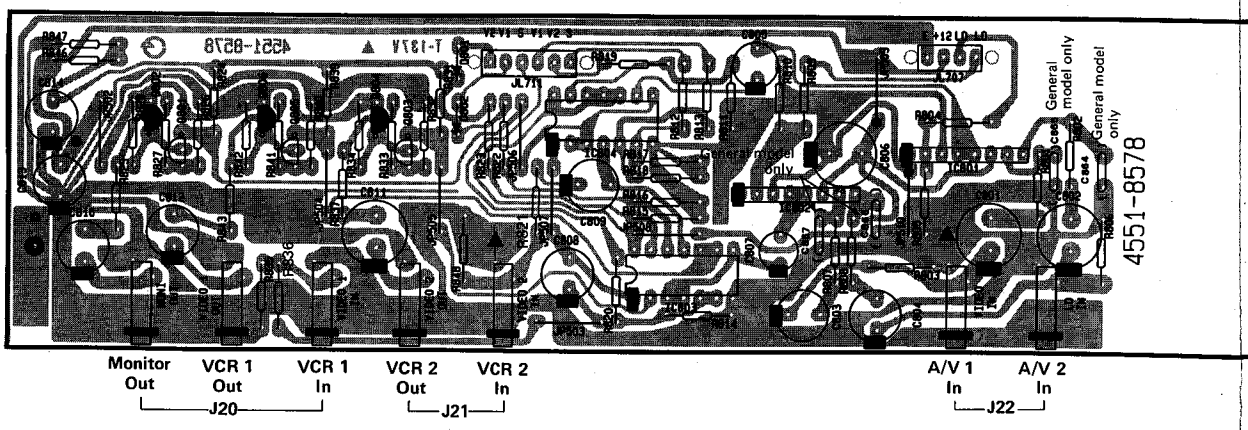


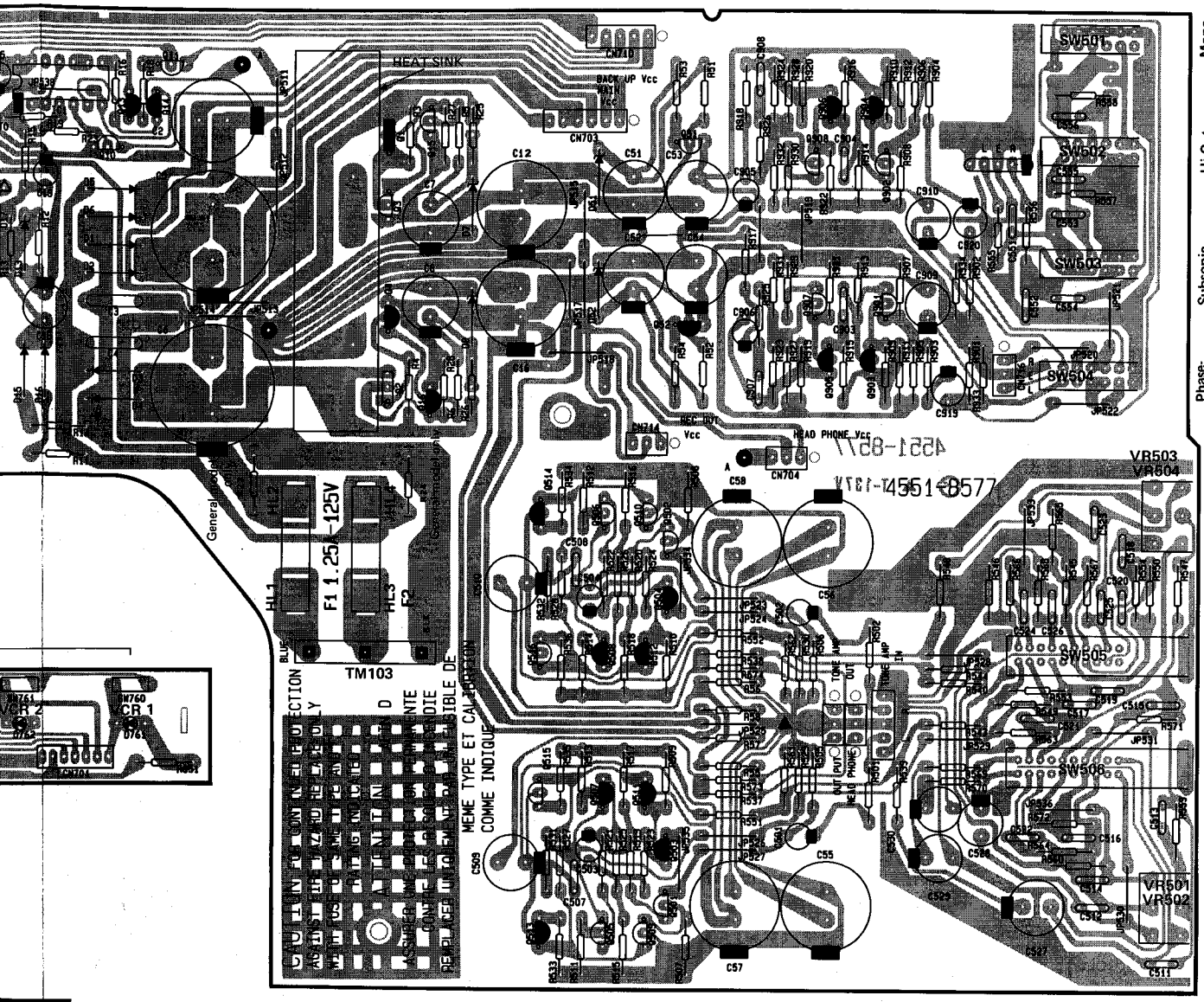
Mute

PCB-4 Function Switch P. C. Board

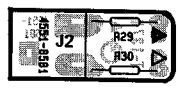


PCB-7 Video P. C. Board



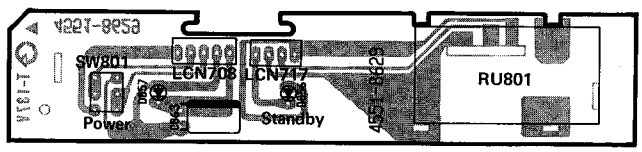


PCB-10 Mini Jack P. C. Board

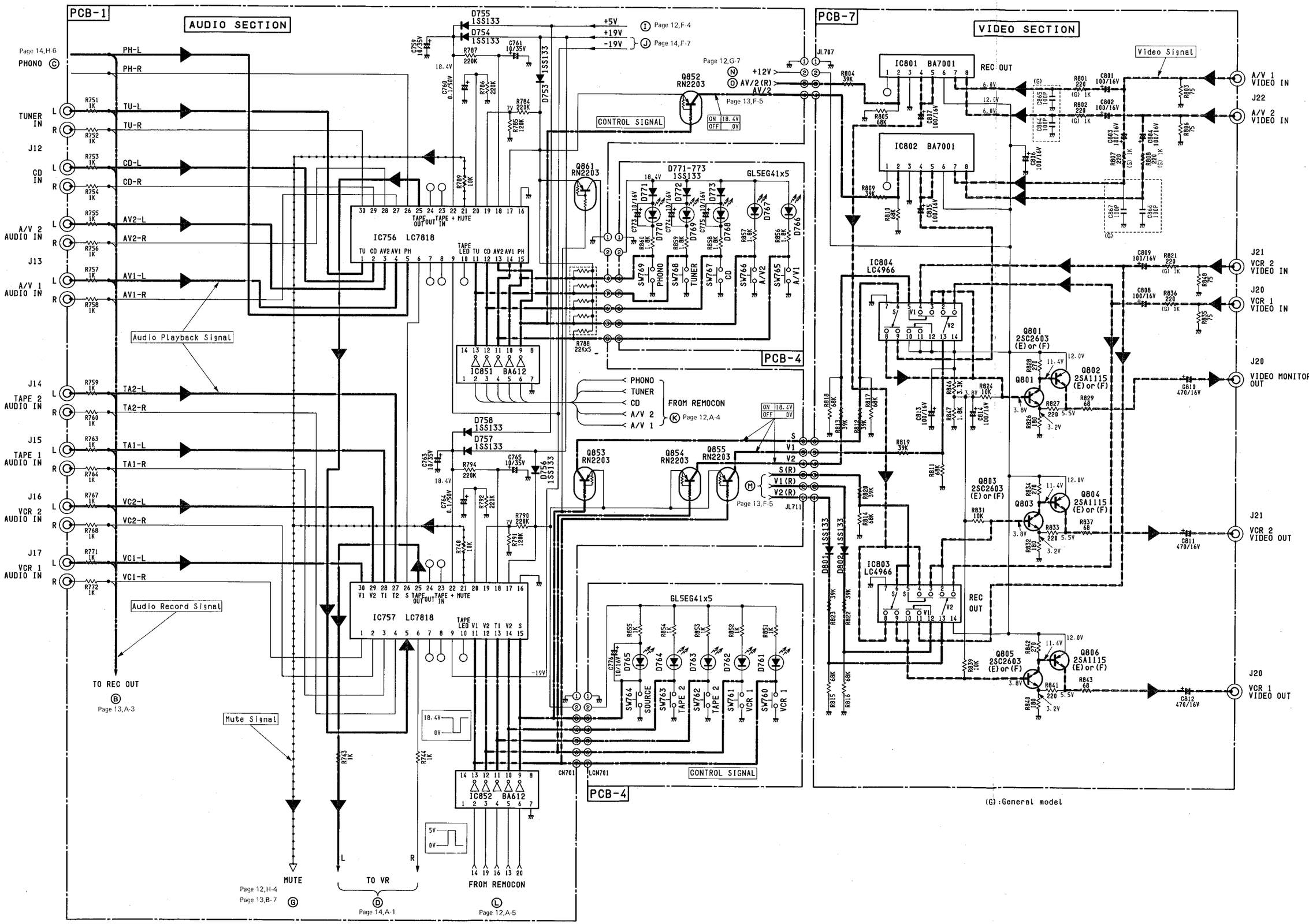


Remote Power On

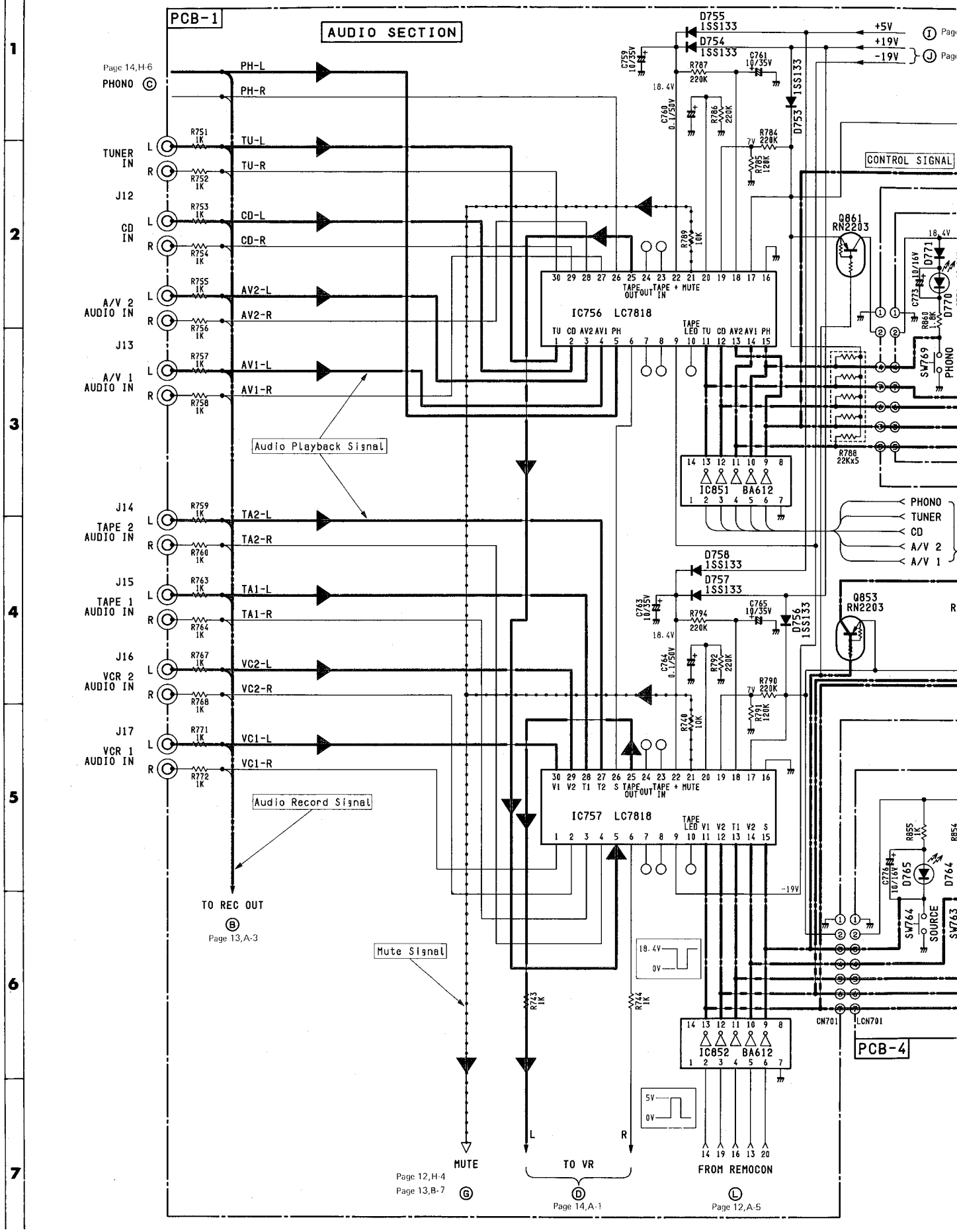
PCB-11 Power Indicator P. C. Board



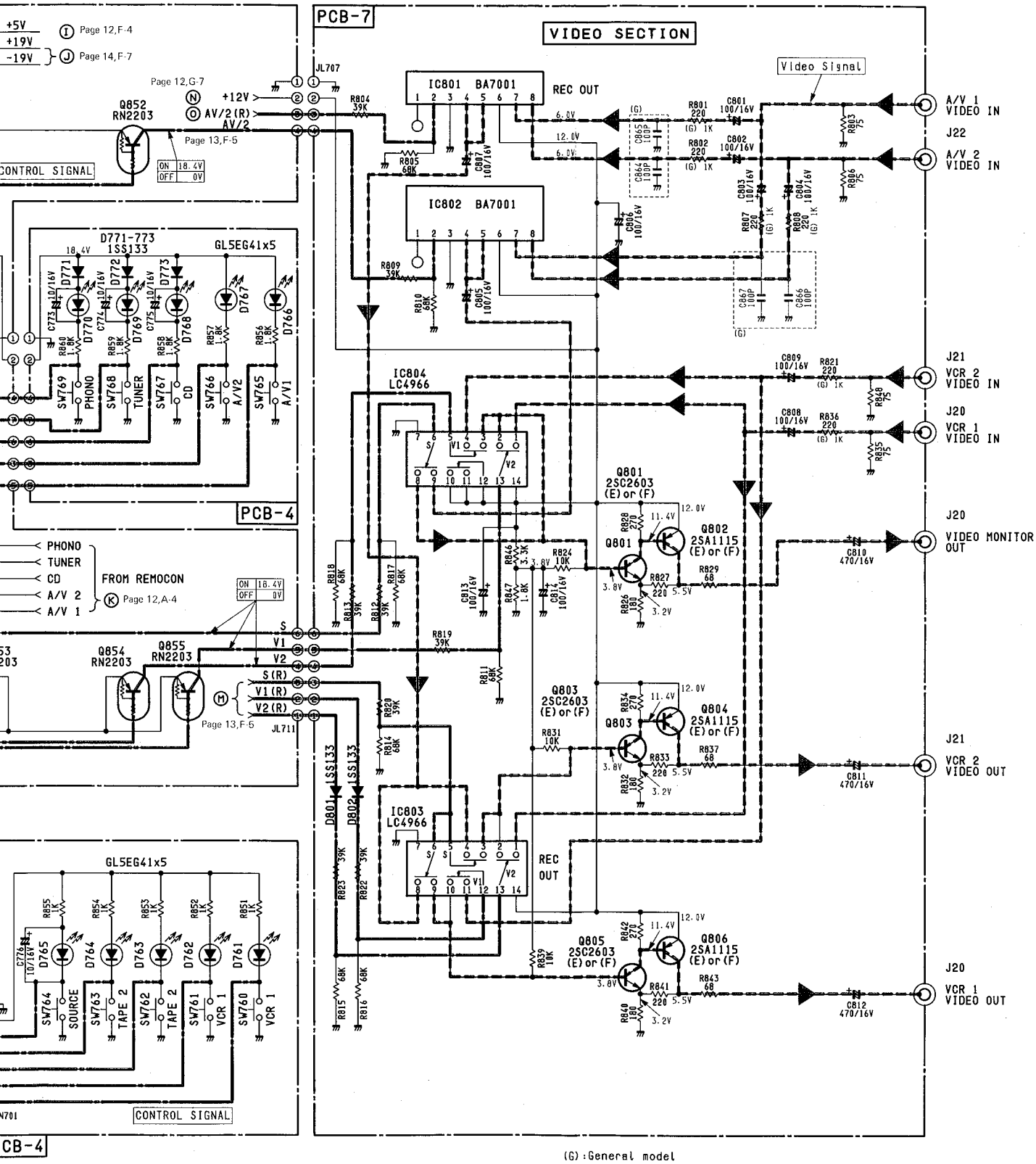
SCHEMATIC DIAGRAM (1)



SCHEMATIC DIAGRAM (1)



F G H I J



(G):General model

SCHEMATIC DIAGRAM (2)

PCB-1

PCB-11

Q871 2SA1115 (E) or (F)

R863 1K

R862 1K

R864 10K

R861 1K

D851 RD2R7EB2

C852 100P

C851 100P

CS851

IC857 M50117P

CN709

LCN717

RU801

CX20106A

22K

47

47μ

330P

3.3μ

4.7

1μ

D856 GL5HY10 STAND BY

SW801

POWER ON

C854 10/16V

5.0V

3.0V

D857 GL5EG21 POWER LED

LCN708

CN708

IC856 LB1641BP

C858 0.01

D853 RD5R6EB2

R873 10

C868 1000P

UP

DOWN

Q863 2SC2603 (E) or (F)

R870 220

R869 47K

R872 330

R871 47K

Q864 2SC2603 (E) or (F)

IC855 TC4011BP

R866 10K

R865 1M

C854 0.01

C855 1/50V

D892, 893 1SS133

IC854 TC4013BP

C891 0.01

R891 1M

R699 10K

Page 14,H-5 (H) MUTE MM

Q862 2SD667A(C)

C856 220/6.3V

C857 220/6.3V

R868 4.7K

D852 RD5R6EB2

Q12 2SC3246 (H)

R20 1K

D14 10DF2

S1

C1 0.01

D11 10DF2

C17 470/25V

C20 0.1

D891 1S2473

T2 POWER

AC120V

JL710 Page 11,C-7 Page 13,B-7

(G) FUNCTION MUTE

Mute Signal

+5V (I) Page 11,E-1

Page 11,F-4 (K) TO FUNCTION

A/V1

A/V2

CD

TUNER

PHONO

IC853 TC4S148P

VR UP

VR DOWN

POWER

MUTE

RL1 OUTPUT RELAY

See page 14 cod. I-2

R22 270

D18 10DF2

R21 270

Q13 RN2203

Q10 RN1203

R33 4.7K

R19 680K

R15 100K

R18 10K

Q11 2SD667A (C)

R16 10K

Q14 2SA1115 (E) or (F)

IC1 TC4069BP

C15 47/16V

D17 1S2473

D12 1S2473

D16 1S2471

D15 1S2471

R11 2.2K

R13 470K

R14 2.2K

R12 1K

C19 10/16V

C18 10/16V

D13 RD5R6EB2

R29 1K

R30 1K

TO H200 POWER REMOTE

Page 14,H-5 (A) AC

Page 11,D-7 (L) TO REC OUT FUNCTION

Source

V2

V1

T2

T1

MUTE ON 0.6V

MUTE OFF -19.0V

Q893 RN1203

Q892 2SA1115 (E) or (F)

Q891 RN1203

R894 1M

C892 0.1

R893 10K

R892 1.2K

Page 14,D-1 (E) L VR IN

Page 14,D-2 (F) R VR IN

Q895 2SK364 (V) or (BL)

D895 1SS133

R895 330K

R897 10K

Q896 2SK364 (V) or (BL)

D896 1SS133

R896 330K

ON -19.0V

OFF -19.0V

19.0V

D894 GL5HD10 MUTE

PCB-5

+19V

-19V

Page 14,F-7 (J)

MUTE ON 5.0V

MUTE OFF 0V

Q698 2SD667A (C)

Q699 2SD667A (C)

R698 22K

R699 27

33.4V

32.8V

Q865 2SB1015 (O) or (Y)

Q867

Q866

Q866.867 2SC2603 (E) or (F)

R875 2.2

R877 4.7K

R876 100

12.0V

13.0V

C860 470/16V

C859 470/16V

D854 RD13EB2

Q869 2SB1015 (O) or (Y)

Q870

Q868

Q868.870 2SC2603 (E) or (F)

R880 2.2

R878 330

R881 4.7K

R879 100

C862 470/16V

C861 470/16V

D855 RD13EB2

34.0V

+34V (P) Page 14,G-4

-34V (Q) Page 12,F-5 Page 14,G-4

+12V (N) Page 11,F-1

D5 10DF2

D6 10DF2

C2 1000/50V

R23 2.2K

R24 2.2K

(G)

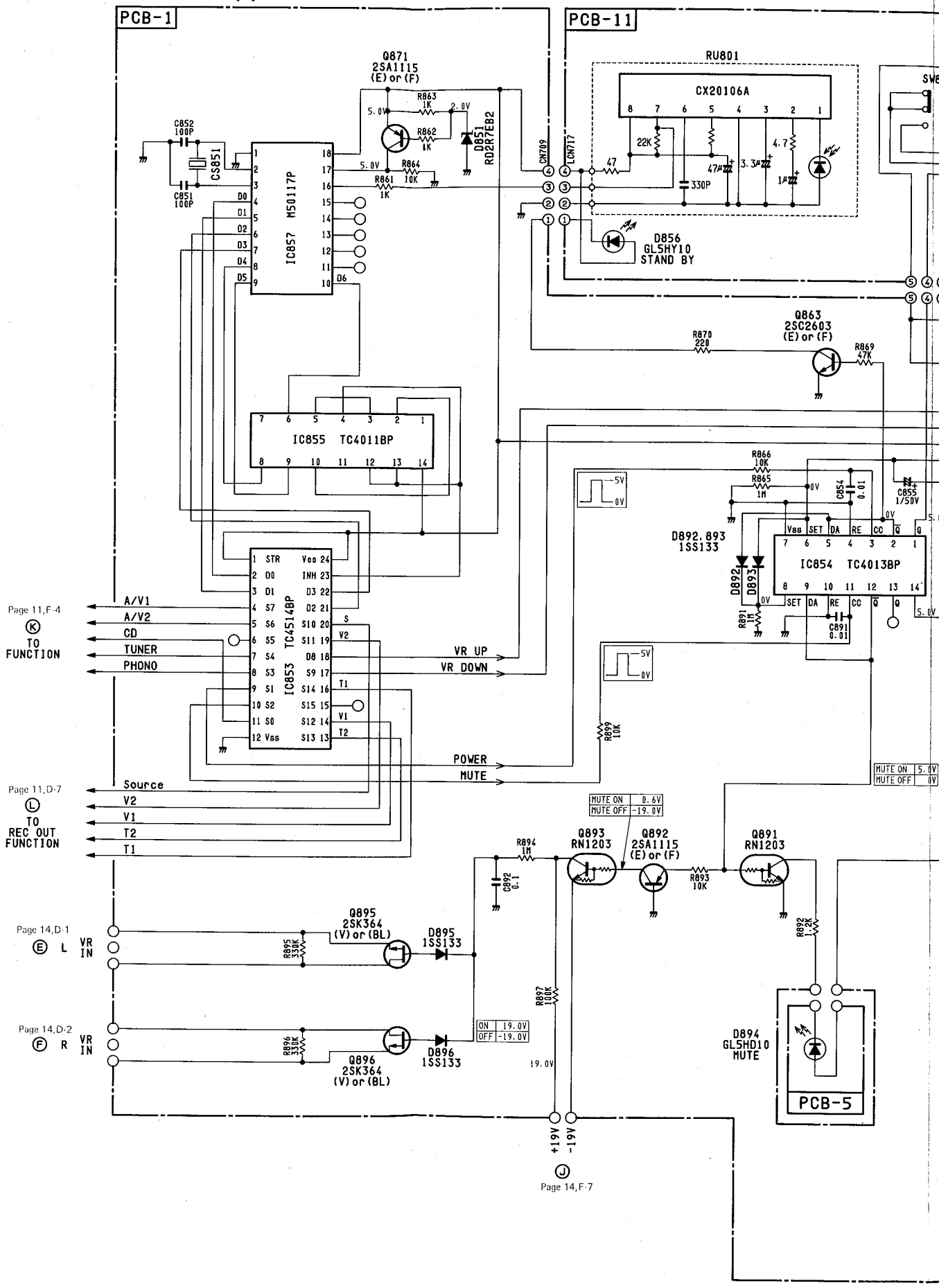
(G):General model

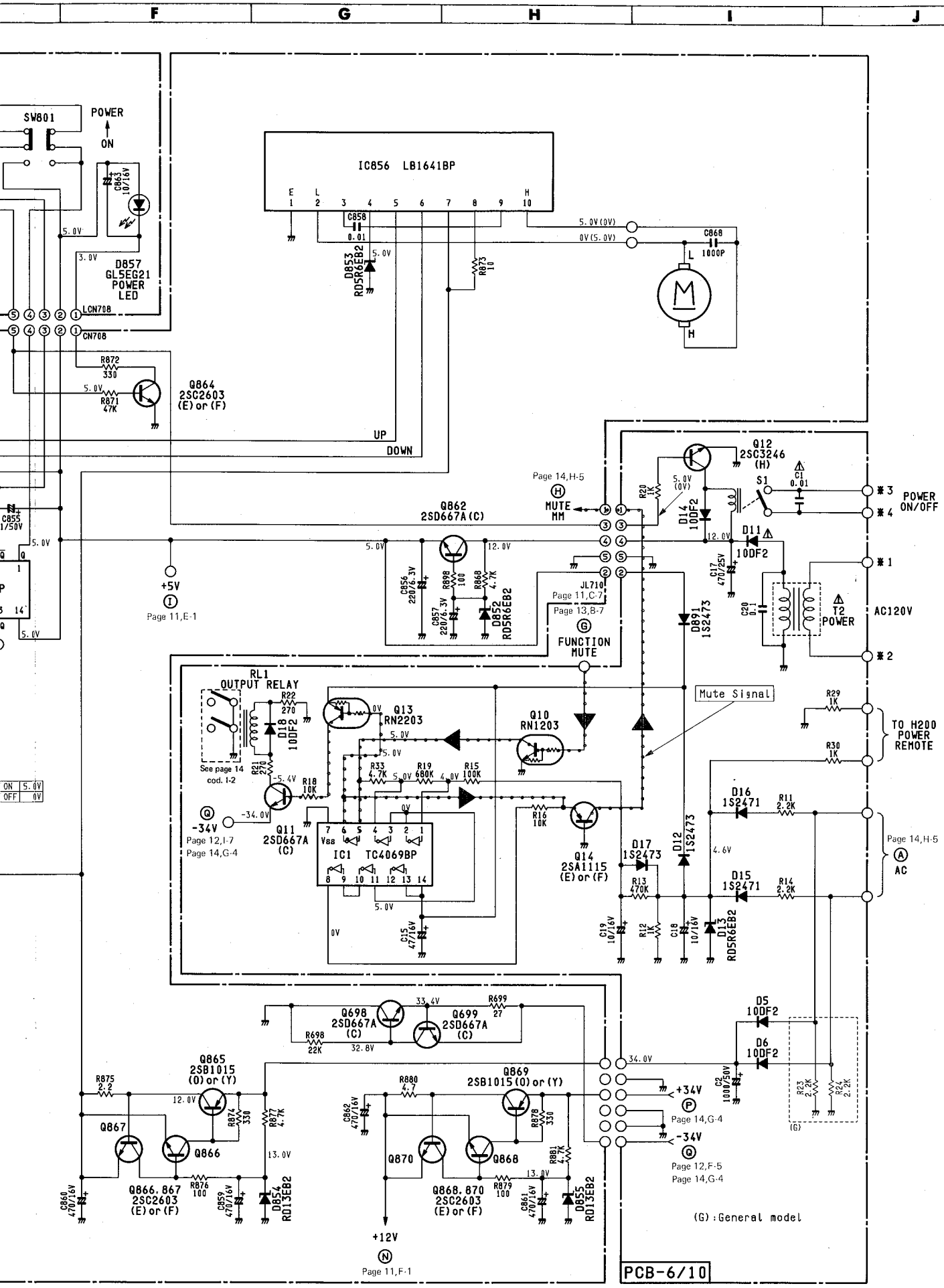
PCB-6/10

-34V (Q) Page 14,G-4

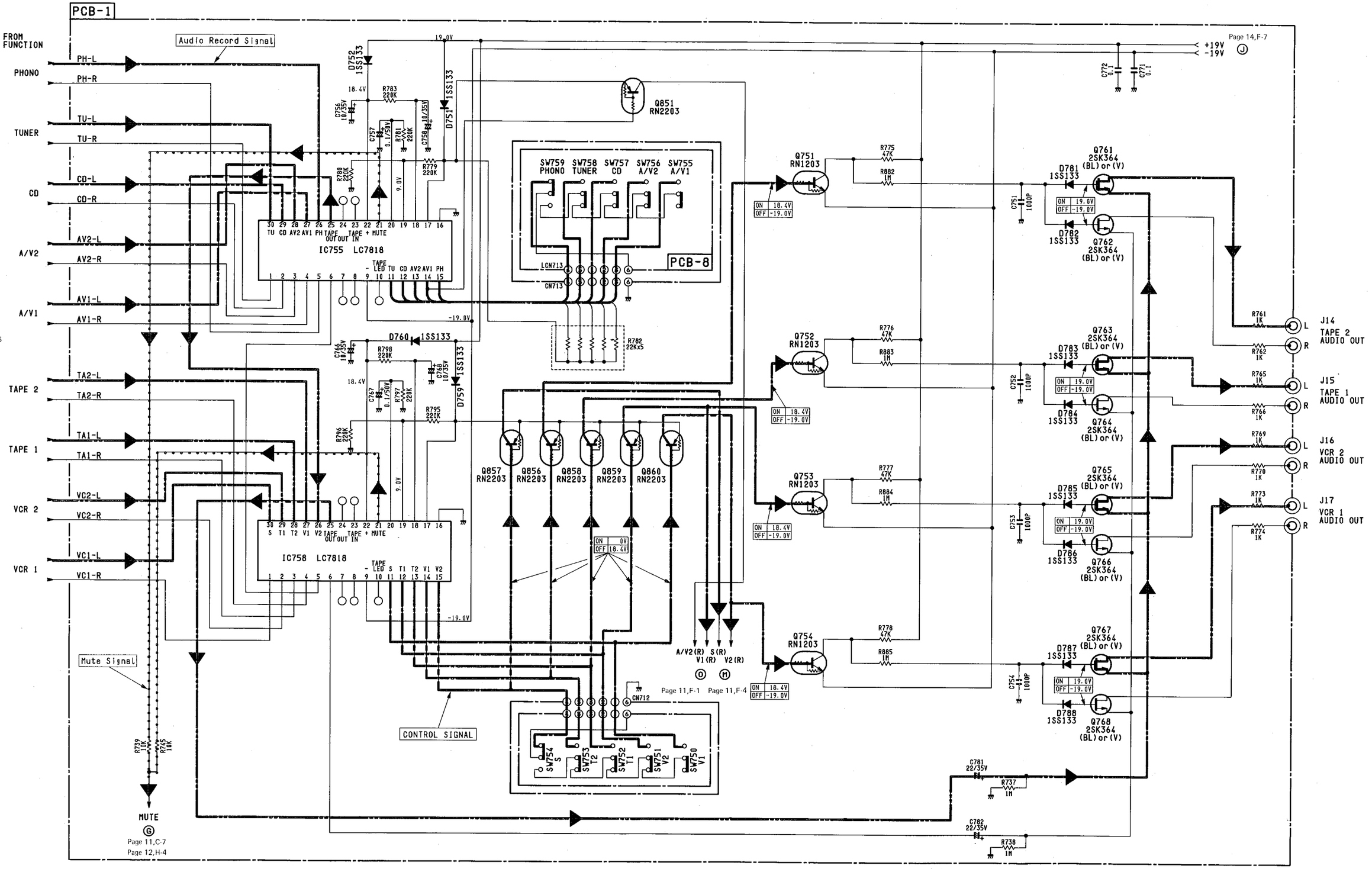
Page 12,I-7 Page 14,G-4

SCHEMATIC DIAGRAM (2)

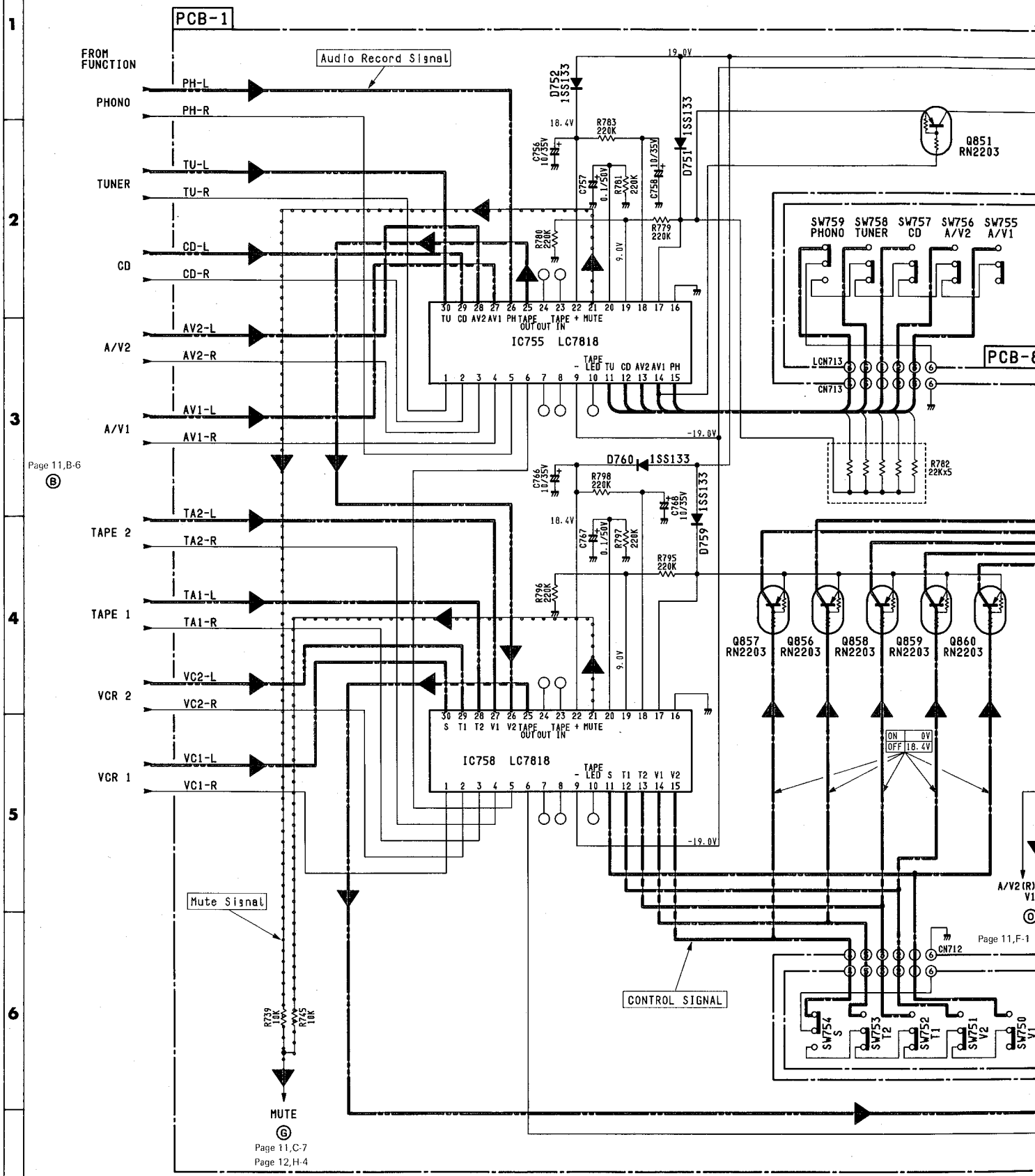


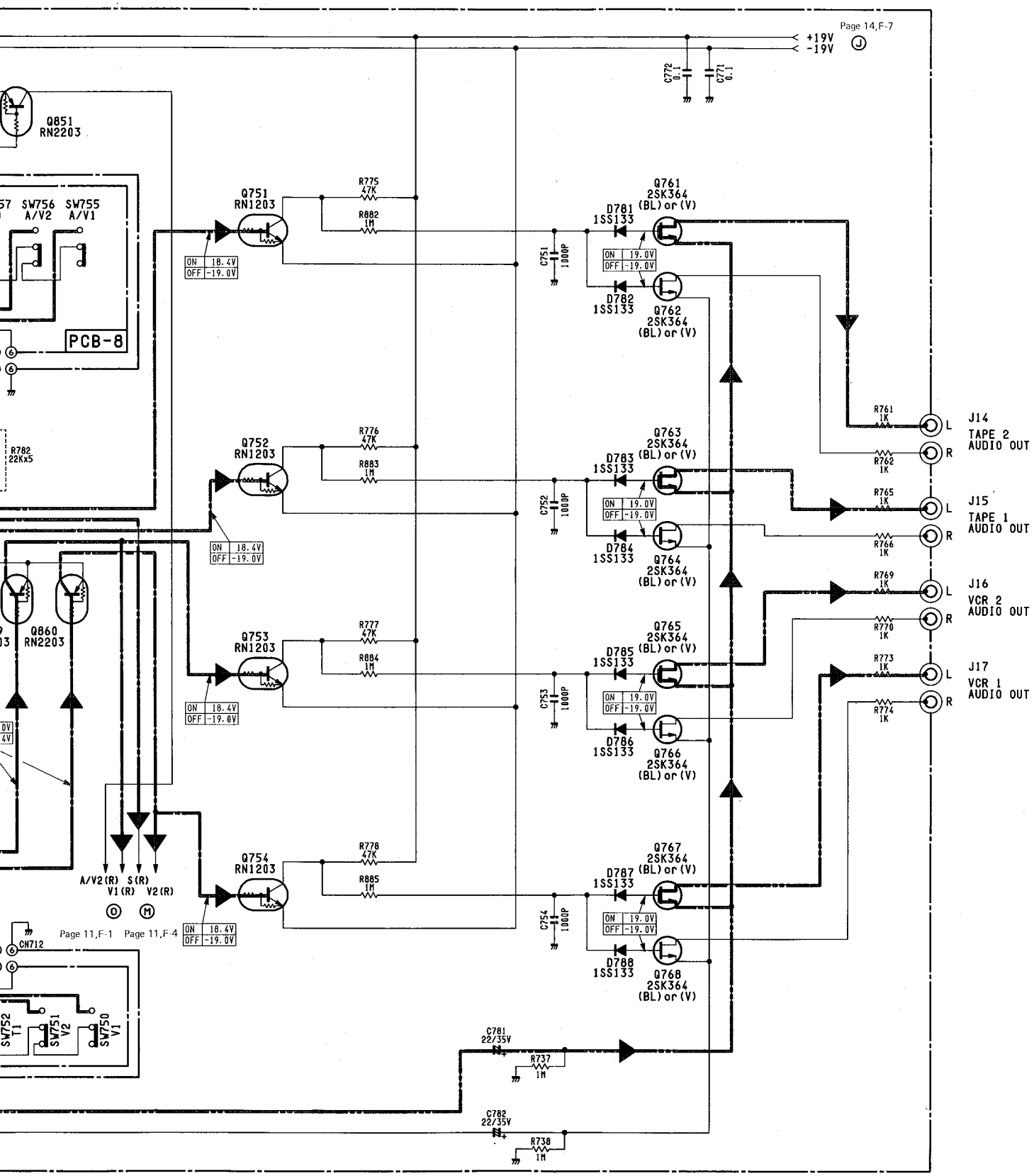

F
G
H
I
J
SW801
POWER
ON
IC856 LB1641BP
E L
1 2 3 4 5 6 7 8 9 10 H
C858 0.01
D853 RD5R6EB2
R873 10
5.0V(0V)
0V(5.0V)
C868 1000P
L
M
H
D857 GL5EG21 POWER LED
LCN708
CN708
R872 330
R871 47K
Q864 2SC2603 (E) or (F)
UP
DOWN
Q862 2SD667A(C)
Page 14,H-5
MUTE MM
Q12 2SC3246 (H)
S1
C1 0.01
POWER ON/OFF
D14 10DF2
D11 10DF2
C17 470/25V
C20 0.1
T2 POWER
AC120V
D891 1S2473
JL710
Page 11,C-7
Page 13,B-7
FUNCTION MUTE
C856 220/6.3V
C857 220/6.3V
R898 100
R868 4.7K
D852 RD5R6EB2
+5V
Page 11,E-1
RL1 OUTPUT RELAY
R22 270
D18 10DF2
Q13 RN2203
Q10 RN1203
Mute Signal
R29 1K
R30 1K
TO H200 POWER REMOTE
See page 14 cod. I-2
R21 270
R18 10K
R33 4.7K
R19 680K
R15 100K
R16 10K
Q11 2SD667A (C)
-34V
Page 12,I-7
Page 14,G-4
IC1 TC4069BP
Vss
Q14 2SA1115 (E) or (F)
D16 1S2471
R11 2.2K
D17 1S2473
D12 1S2473
D15 1S2471
R14 2.2K
R13 470K
C19 10/16V
R12 1K
C18 10/16V
D13 RD5R6EB2
C15 470/16V
Page 14,H-5
AC
Q698 2SD667A (C)
Q699 2SD667A (C)
R698 22K
R699 27
33.4V
32.8V
D5 10DF2
D6 10DF2
C2 1000/50V
R23 2.2K
R24 2.2K
(G)
Q865 2SB1015 (O) or (Y)
R875 2.2
R874 330
R877 4.7K
Q867
Q866
Q866.867 2SC2603 (E) or (F)
R876 100
C860 470/16V
C859 470/16V
D854 RD13EB2
Q869 2SB1015 (O) or (Y)
R880 4.7
R878 330
R881 4.7K
Q870
Q868
Q868.870 2SC2603 (E) or (F)
R879 100
C862 470/16V
C861 470/16V
D855 RD13EB2
+34V
Page 14,G-4
-34V
Page 12,F-5
Page 14,G-4
+12V
Page 11,F-1
(G):General model
PCB-6/10

SCHEMATIC DIAGRAM (3)

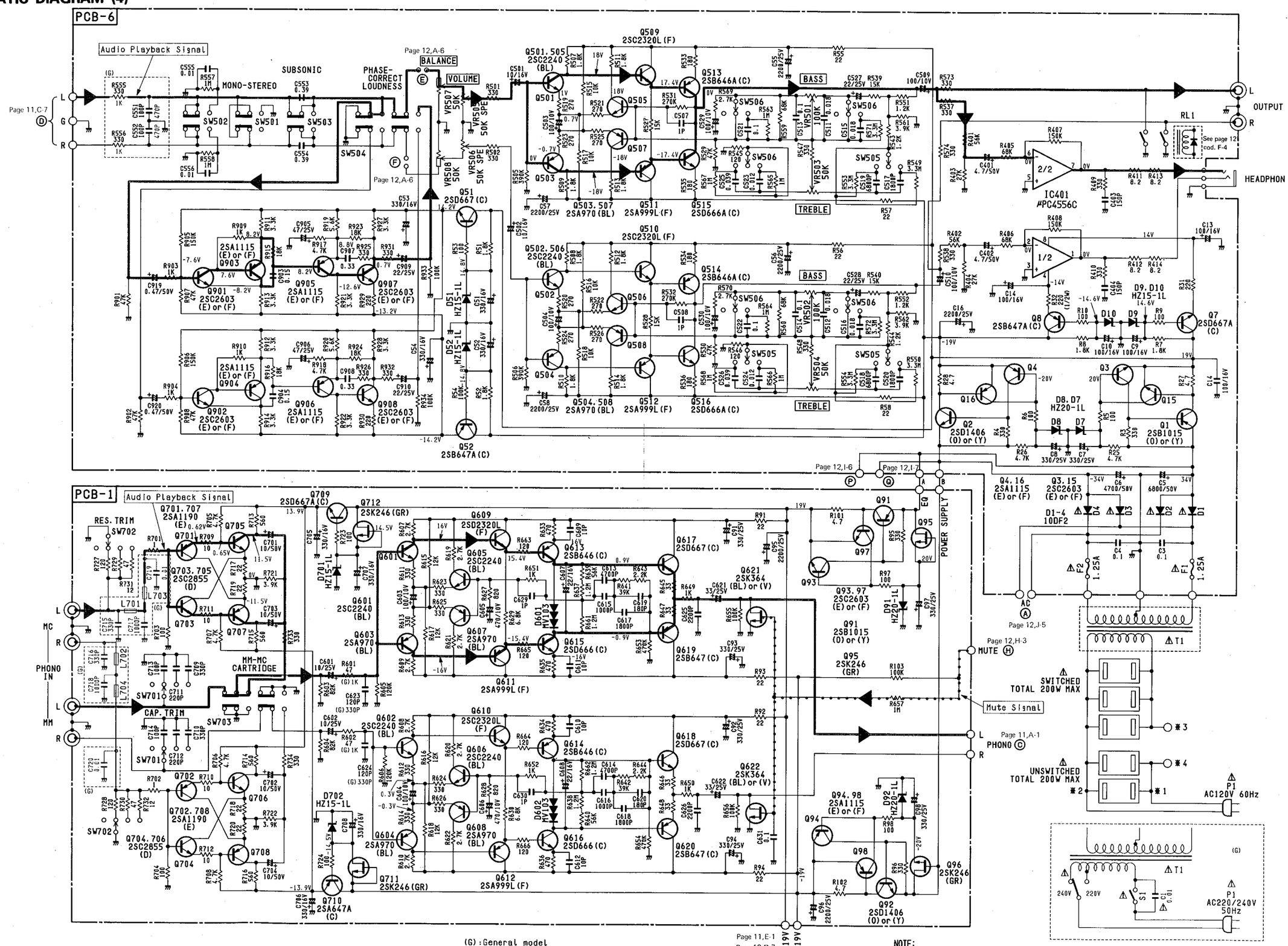


SCHEMATIC DIAGRAM (3)




F
G
H
I
J
Page 14,F-7
+19V
-19V
C772 0.1
C771 0.1
Q851 RN2203
SW756 A/V2
SW755 A/V1
PCB-8
R782 22Kx5
Q751 RN1203
R775 47K
R882 1M
ON 18.4V
OFF -19.0V
C751 1000P
D781 1SS133
D782 1SS133
Q761 2SK364 (BL) or (V)
Q762 2SK364 (BL) or (V)
Q752 RN1203
R776 47K
R883 1M
C752 1000P
D783 1SS133
D784 1SS133
Q763 2SK364 (BL) or (V)
Q764 2SK364 (BL) or (V)
Q860 RN2203
Q753 RN1203
R777 47K
R884 1M
C753 1000P
D785 1SS133
D786 1SS133
Q765 2SK364 (BL) or (V)
Q766 2SK364 (BL) or (V)
Q754 RN1203
R778 47K
R885 1M
C754 1000P
D787 1SS133
D788 1SS133
Q767 2SK364 (BL) or (V)
Q768 2SK364 (BL) or (V)
A/V2(R) S(R)
V1(R) V2(R)
Page 11,F-1
Page 11,F-4
CN712
SW752 T1
SW751 V2
SW750 V1
C781 22/35V
R737 1M
C782 22/35V
R738 1M
R761 1K
R762 1K
R765 1K
R766 1K
R769 1K
R770 1K
R773 1K
R774 1K
J14 TAPE 2 AUDIO OUT
J15 TAPE 1 AUDIO OUT
J16 VCR 2 AUDIO OUT
J17 VCR 1 AUDIO OUT
L
R

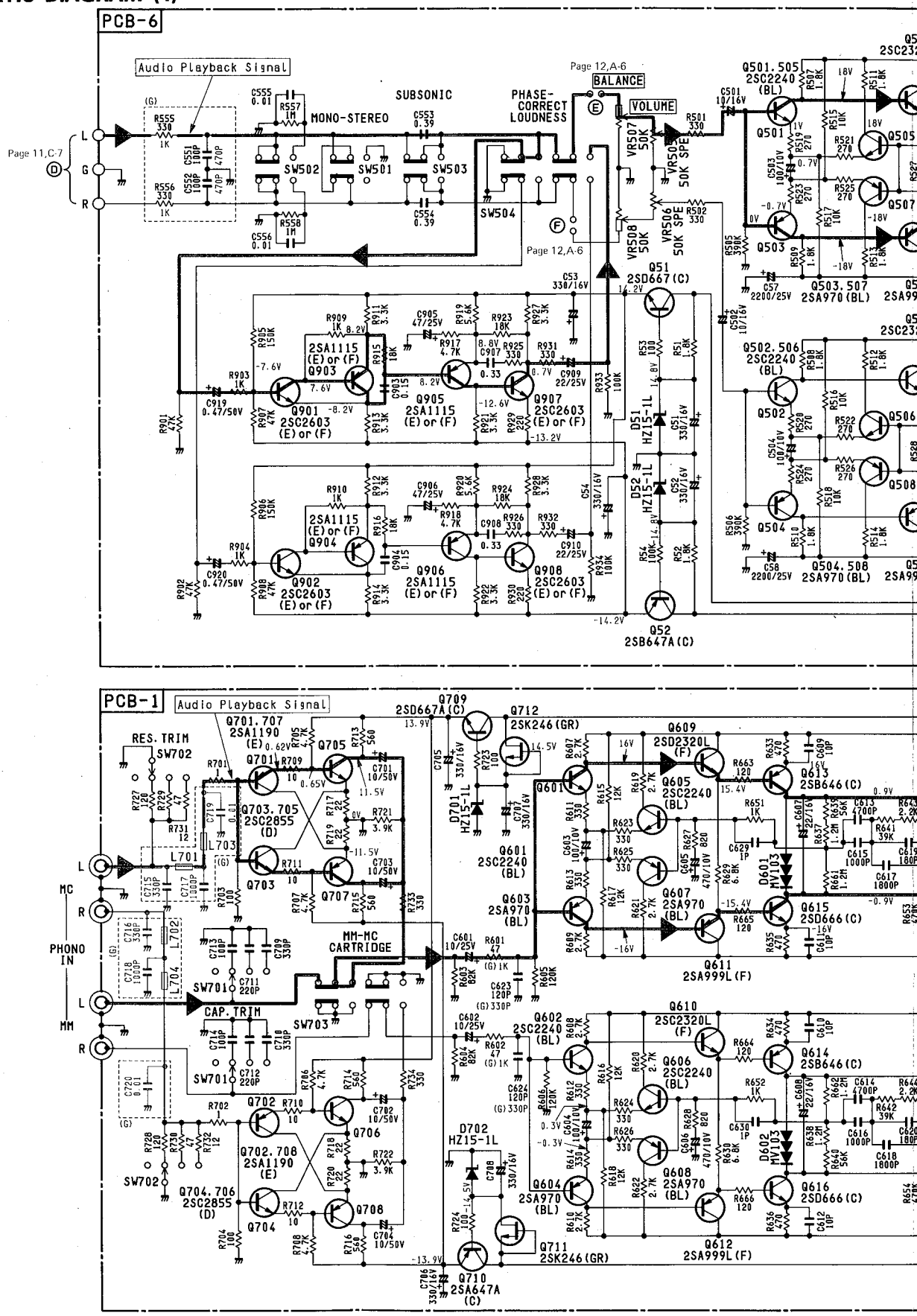
SCHEMATIC DIAGRAM (4)



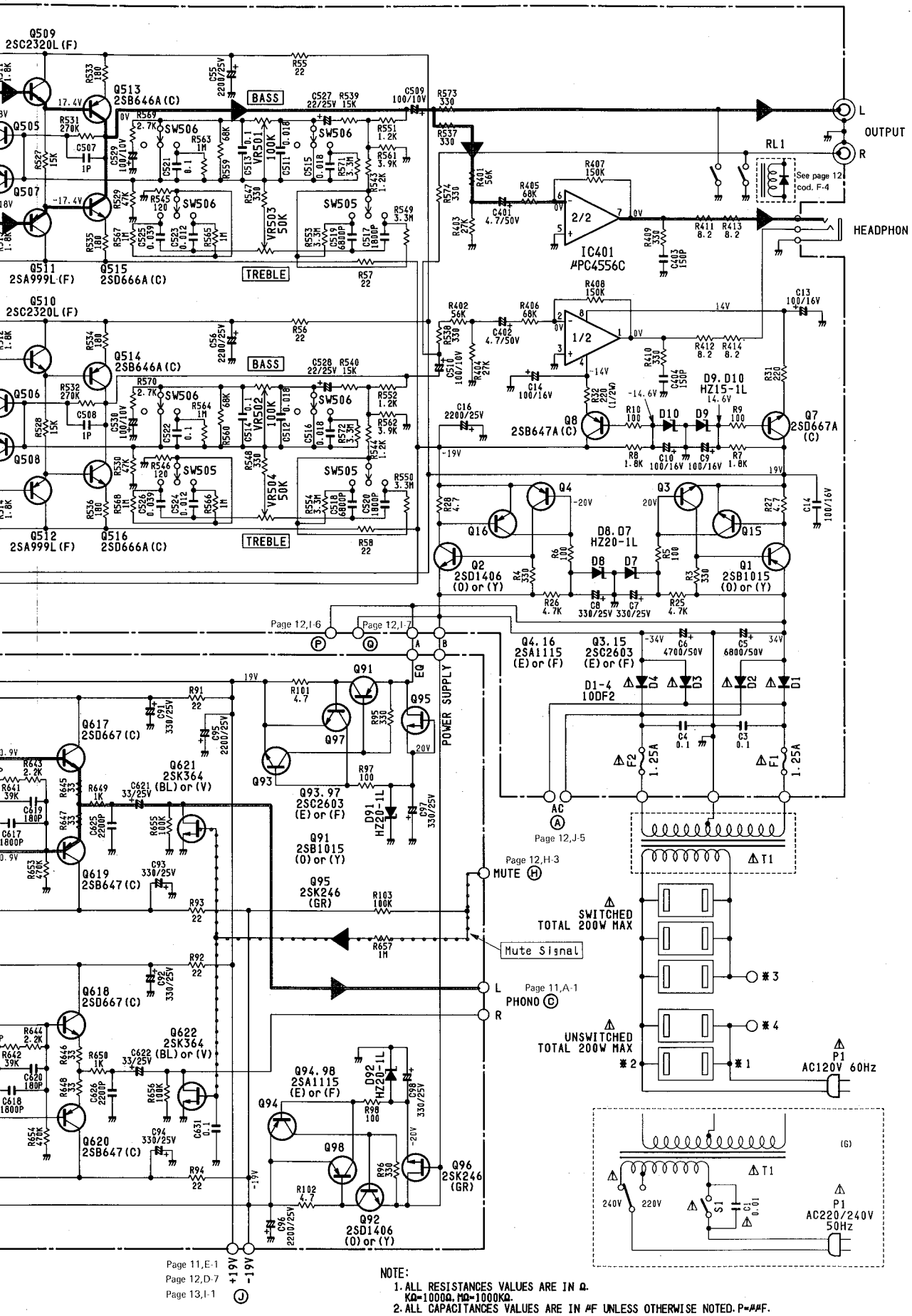
(G):General model

NOTE:
1. ALL RESISTANCES VALUES ARE IN Ω.
KΩ=1000Ω, MΩ=1000KΩ.
2. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμF.

SCHEMATIC DIAGRAM (4)



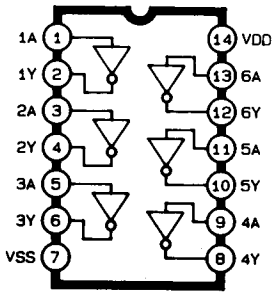
(G):General model



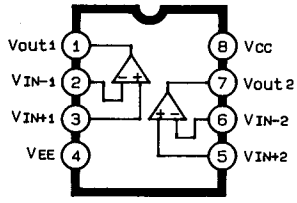
NOTE:
1. ALL RESISTANCES VALUES ARE IN Ω.
KΩ=1000Ω, MΩ=1000KΩ.
2. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμF.

IC BLOCK DIAGRAM

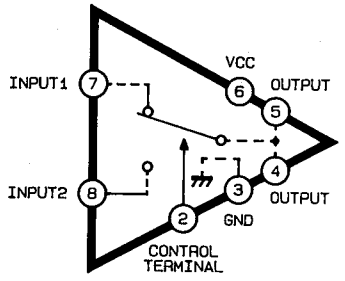
IC1 : TC4069BP
Tone Amp.



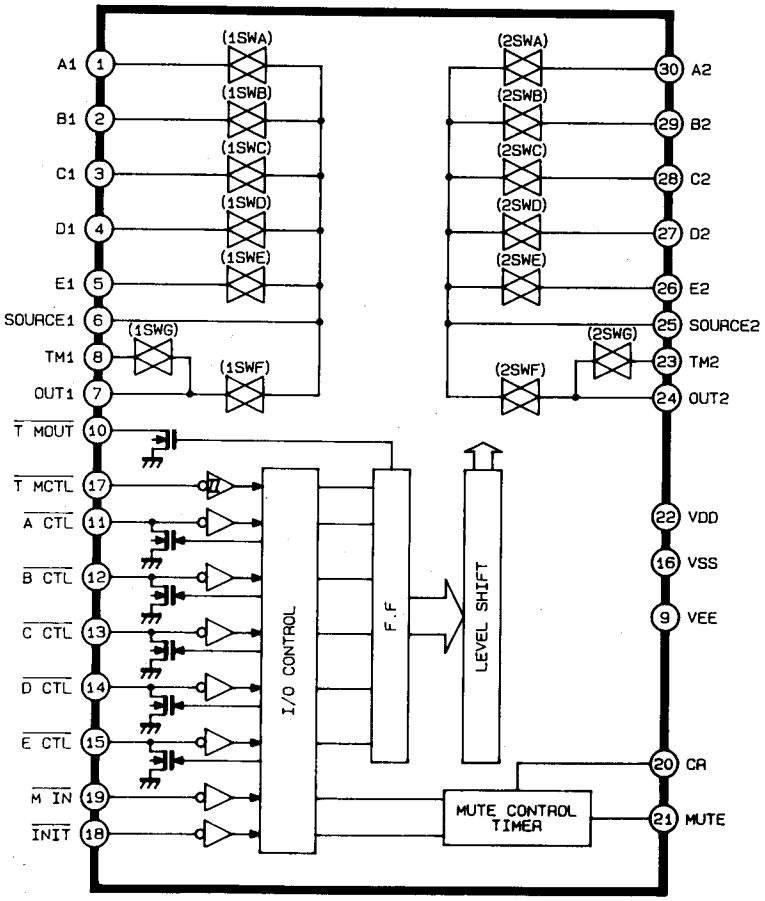
IC401 : μPC4556C
Headphone Amp.



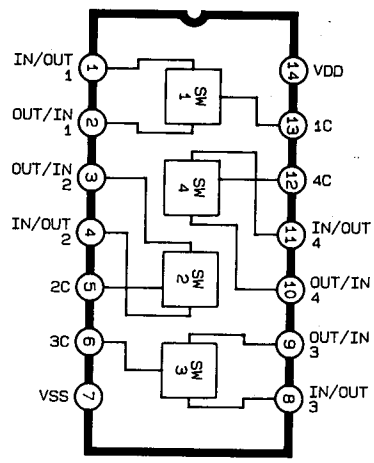
IC801, 802 : BA7001
Rec. Out Selector



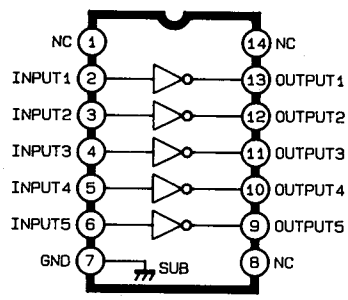
IC755, 756, 757, 758 : LC7818
Function Selector



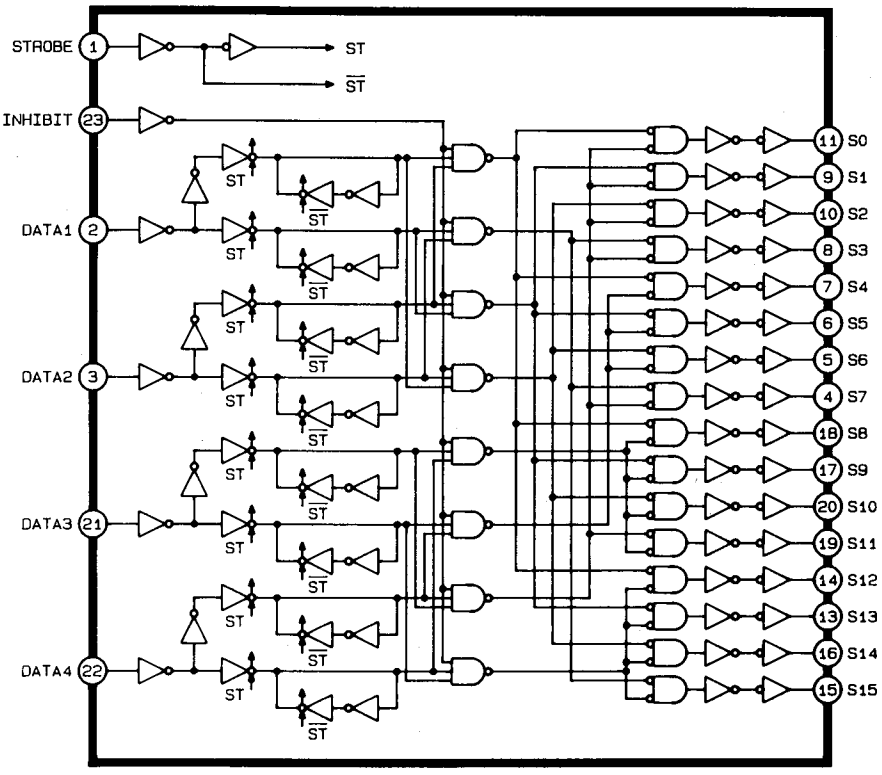
IC803, 804 : LC4966
Rec. Out Selector



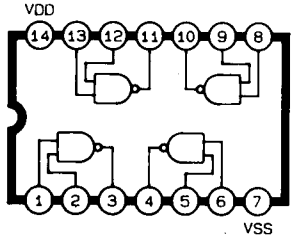
IC851, 852 : BA612
Amp.



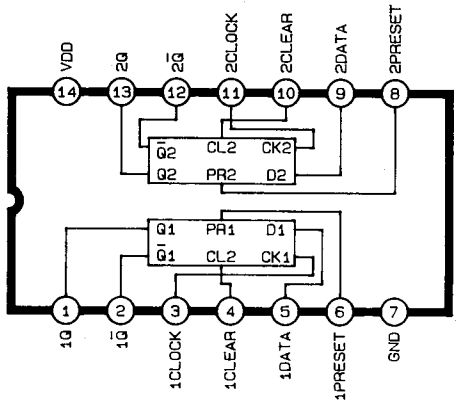
IC853 : TC4514BP
Selector



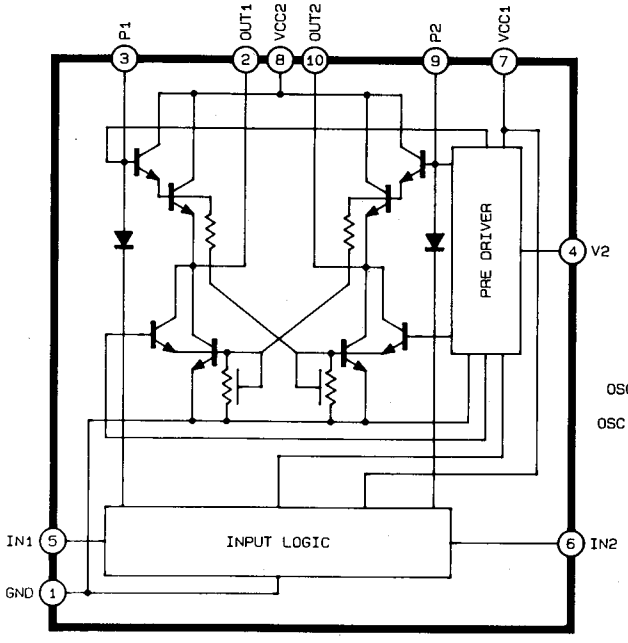
IC854 : TC4013BP
Selector



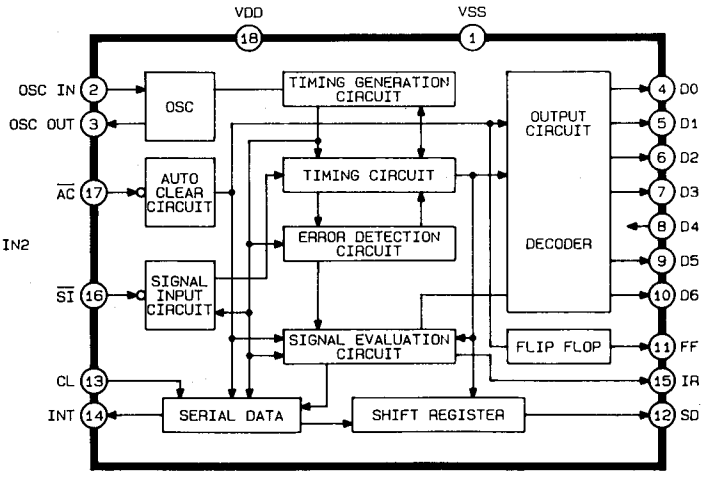
IC855 : TC4011BP
Nand Gate



IC856 : LB1641
Motor Driver



IC857 : M50117P
Remote Control Micro Processor



ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description
		PCB-1 EQUALIZER P.C. BOARD	
		CAPACITORS	
699	C9	5345-107C041	CAP, MINI ELE 100 μ/16V
699	C10	5345-107C041	CAP, MINI ELE 100 μ/16V
699	C13	5345-107C041	CAP, MINI ELE 100 μ/16V
699	C14	5345-107C041	CAP, MINI ELE 100 μ/16V
750	C91	5345-337D041	CAP, MINI ELE 330 μ/25V
750	C92	5345-337D041	CAP, MINI ELE 330 μ/25V
750	C93	5345-337D041	CAP, MINI ELE 330 μ/25V
750	C94	5345-337D041	CAP, MINI ELE 330 μ/25V
749	C95	5345-228D041	CAP, MINI ELE 2200 μ/25V
749	C96	5345-228D041	CAP, MINI ELE 2200 μ/25V
750	C97	5345-337D041	CAP, MINI ELE 330 μ/25V
750	C98	5345-337D041	CAP, MINI ELE 330 μ/25V
683	C401	5345-475F0951	CAP, MINI ELE 4.7 μ/50V
683	C402	5345-475F0951	CAP, MINI ELE 4.7 μ/50V
685	C403	5359-1515851	CAP, PPP 150p
685	C404	5359-1515851	CAP, PPP 150p
543	C601	5345-106D0951	CAP, MINI ELE 10 μ/25V
543	C602	5345-106D0951	CAP, MINI ELE 10 μ/25V
546	C603	5345-107B041	CAP, MINI ELE 100 μ/10V
546	C604	5345-107B041	CAP, MINI ELE 100 μ/10V
545	C605	5345-477B0952	CAP, MINI ELE 470 μ/10V
545	C606	5345-477B0952	CAP, MINI ELE 470 μ/10V
547	C607	5345-226C041	CAP, MINI ELE 22 μ/16V
547	C608	5345-226C041	CAP, MINI ELE 22 μ/16V
550	C609	5353-100934	CAP, MCA 10p
550	C610	5353-100934	CAP, MCA 10p
550	C611	5353-100934	CAP, MCA 10p
550	C612	5353-100934	CAP, MCA 10p
554	C613	5359-4725851	CAP, PPP 4700p
554	C614	5359-4725851	CAP, PPP 4700p
556	C615	5359-1025851	CAP, PPP 1000p
556	C616	5359-1025851	CAP, PPP 1000p
553	C617	5359-1825851	CAP, PPP 1800p
553	C618	5359-1825851	CAP, PPP 1800p
552	C619	5359-1815851	CAP, PPP 180p
552	C620	5359-1815851	CAP, PPP 180p
544	C621	5345-336D0951	CAP, MINI ELE 33 μ/25V
544	C622	5345-336D0951	CAP, MINI ELE 33 μ/25V
549	C623	5353-121534	CAP, MCA 120p UA N
549A	C623	5359-3315851	CAP, PPP 330p G
549	C624	5353-121534	CAP, MCA 120p UA N
549A	C624	5359-3315851	CAP, PPP 330p G
555	C625	5359-2225851	CAP, PPP 2200p
555	C626	5359-2225851	CAP, PPP 2200p
551	C629	5353-010934	CAP, MCA 1p
551	C630	5353-010934	CAP, MCA 1p
558	C631	5354-104593	CAP, MYL .1 μ
504	C701	5345-106F0951	CAP, MINI ELE 10 μ/50V
504	C702	5345-106F0951	CAP, MINI ELE 10 μ/50V
504	C703	5345-106F0951	CAP, MINI ELE 10 μ/50V
504	C704	5345-106F0951	CAP, MINI ELE 10 μ/50V
522	C705	5345-337C041	CAP, MINI ELE 330 μ/16V
522	C706	5345-337C041	CAP, MINI ELE 330 μ/16V
522	C707	5345-337C041	CAP, MINI ELE 330 μ/16V
522	C708	5345-337C041	CAP, MINI ELE 330 μ/16V
557	C709	5359-3315851	CAP, PPP 330p
557	C710	5359-3315851	CAP, PPP 330p
559	C711	5359-2215851	CAP, PPP 220p
559	C712	5359-2215851	CAP, PPP 220p
560	C713	5359-1015851	CAP, PPP 100p
560	C714	5359-1015851	CAP, PPP 100p
042A	C715	5359-3315851	CAP, PPP 330p G
042A	C716	5359-3315851	CAP, PPP 330p G
043A	C717	5359-1025851	CAP, PPP 1000p G
043A	C718	5359-1025851	CAP, PPP 1000p G
044A	C719	5359-S010J103	CAP, PPP .01 μ G
044A	C720	5359-S010J103	CAP, PPP .01 μ G
461	C751	5359-S010J102	CAP, PPP 1000p
461	C752	5359-S010J102	CAP, PPP 1000p
461	C753	5359-S010J102	CAP, PPP 1000p
461	C754	5359-S010J102	CAP, PPP 1000p
448	C756	5345-106D0951	CAP, MINI ELE 10 μ/25V
449	C757	5345-104F0951	CAP, MINI ELE .1 μ/50V
448	C758	5345-106D0951	CAP, MINI ELE 10 μ/25V
448	C759	5345-106D0951	CAP, MINI ELE 10 μ/25V
449	C760	5345-104F0951	CAP, MINI ELE .1 μ/50V
448	C761	5345-106D0951	CAP, MINI ELE 10 μ/25V
460	C762	5359-S010J222	CAP, PPP 2200p
448	C763	5345-106D0951	CAP, MINI ELE 10 μ/25V
449	C764	5345-104F0951	CAP, MINI ELE .1 μ/50V
448	C765	5345-106D0951	CAP, MINI ELE 10 μ/25V
448	C766	5345-106D0951	CAP, MINI ELE 10 μ/25V
449	C767	5345-104F0951	CAP, MINI ELE .1 μ/50V
448	C768	5345-106D0951	CAP, MINI ELE 10 μ/25V
415	C771	5354-104593	CAP, MYL .1 μ
415	C772	5354-104593	CAP, MYL .1 μ
462	C781	5345-336D0951	CAP, MINI ELE 33 μ/25V
462	C782	5345-336D0951	CAP, MINI ELE 33 μ/25V
409	C851	5359-1015851	CAP, PPP 100p
409	C852	5359-1015851	CAP, PPP 100p
407	C854	5359-S010J103	CAP, PPP .01 μ
406	C855	5345-105F041	CAP, MINI ELE 1 μ/50V
388	C856	5345-227A041	CAP, MINI ELE 220 μ/6.3V
388	C857	5345-227A041	CAP, MINI ELE 220 μ/6.3V
407	C858	5359-S010J103	CAP, PPP .01 μ
777	C859	5345-477C041	CAP, MINI ELE 470 μ/16V
777	C860	5345-477C041	CAP, MINI ELE 470 μ/16V
777	C861	5345-477C041	CAP, MINI ELE 470 μ/16V
777	C862	5345-477C041	CAP, MINI ELE 470 μ/16V
408	C868	5359-S010J102	CAP, PPP 1000p
407	C891	5359-S010J103	CAP, PPP .01 μ
415	C892	5354-104593	CAP, MYL .1 μ
		RESISTORS	
701	R7	5135-182522	RES, CBN 1/2P 1.8K
701	R8	5135-182522	RES, CBN 1/2P 1.8K
703	R9	5135-101522	RES, CBN 1/2P 100
703	R10	5135-101522	RES, CBN 1/2P 100
702	R31	5135-221522	RES, CBN 1/2P 220
702	R32	5135-221522	RES, CBN 1/2P 220
756	R91	5135-220522	RES, CBN 1/2P 22
756	R92	5135-220522	RES, CBN 1/2P 22
756	R93	5135-220522	RES, CBN 1/2P 22
756	R94	5135-220522	RES, CBN 1/2P 22
754	R95	5135-331522	RES, CBN 1/2P 330
754	R96	5135-331522	RES, CBN 1/2P 330
753	R97	5135-101522	RES, CBN 1/2P 100
753	R98	5135-101522	RES, CBN 1/2P 100
752	R101	5135-4R7522	RES, CBN 1/2P 4.7
752	R102	5135-4R7522	RES, CBN 1/2P 4.7
576	R103	5135-104522	RES, CBN 1/2P 100K
692	R401	5135-563522	RES, CBN 1/2P 56K
692	R402	5135-563522	RES, CBN 1/2P 56K
691	R403	5135-273522	RES, CBN 1/2P 27K
691	R404	5135-273522	RES, CBN 1/2P 27K
687	R405	5135-683522	RES, CBN 1/2P 68K
687	R406	5135-683522	RES, CBN 1/2P 68K
688	R407	5135-154522	RES, CBN 1/2P 150K
688	R408	5135-154522	RES, CBN 1/2P 150K
689	R409	5135-331522	RES, CBN 1/2P 330
689	R410	5135-331522	RES, CBN 1/2P 330
690	R411	5135-8R2522	RES, CBN 1/2P 8.2
690	R412	5135-8R2522	RES, CBN 1/2P 8.2
690	R413	5135-8R2522	RES, CBN 1/2P 8.2
690	R414	5135-8R2522	RES, CBN 1/2P 8.2
581	R601	5135-470522	RES, CBN 1/2P 47
581A	R601	5135-102522	RES, CBN 1/2P 1K G
581	R602	5135-470522	RES, CBN 1/2P 47
581A	R602	5135-102522	RES, CBN 1/2P 1K G
563	R603	5135-823522	RES, CBN 1/2P 82K
563	R604	5135-823522	RES, CBN 1/2P 82K
564	R605	5135-124522	RES, CBN 1/2P 120K
564	R606	5135-124522	RES, CBN 1/2P 120K
561	R607	5135-272522	RES, CBN 1/2P 2.7K
561	R608	5135-272522	RES, CBN 1/2P 2.7K
561	R609	5135-272522	RES, CBN 1/2P 2.7K

Ser. No.	Ref. No.	Part No.	Description
561	R610	5135-272522	RES, CBN 1/2P 2.7K
566	R611	5135-331522	RES, CBN 1/2P 330
566	R612	5135-331522	RES, CBN 1/2P 330
566	R613	5135-331522	RES, CBN 1/2P 330
566	R614	5135-331522	RES, CBN 1/2P 330
567	R615	5135-123522	RES, CBN 1/2P 12K
567	R616	5135-123522	RES, CBN 1/2P 12K
567	R617	5135-123522	RES, CBN 1/2P 12K
567	R618	5135-123522	RES, CBN 1/2P 12K
561	R619	5135-272522	RES, CBN 1/2P 2.7K
561	R620	5135-272522	RES, CBN 1/2P 2.7K
561	R621	5135-272522	RES, CBN 1/2P 2.7K
561	R622	5135-272522	RES, CBN 1/2P 2.7K
566	R623	5135-331522	RES, CBN 1/2P 330
566	R624	5135-331522	RES, CBN 1/2P 330
566	R625	5135-331522	RES, CBN 1/2P 330
566	R626	5135-331522	RES, CBN 1/2P 330
568	R627	5135-821522	RES, CBN 1/2P 820
568	R628	5135-821522	RES, CBN 1/2P 820
570	R629	5135-682522	RES, CBN 1/2P 6.8K
570	R630	5135-682522	RES, CBN 1/2P 6.8K
562	R633	5135-471522	RES, CBN 1/2P 470
562	R634	5135-471522	RES, CBN 1/2P 470
562	R635	5135-471522	RES, CBN 1/2P 470
562	R636	5135-471522	RES, CBN 1/2P 470
571	R637	5135-125522	RES, CBN 1/2P 1.2M
571	R638	5135-125522	RES, CBN 1/2P 1.2M
572	R639	5135-563522	RES, CBN 1/2P 56K
572	R640	5135-563522	RES, CBN 1/2P 56K
573	R641	5135-393522	RES, CBN 1/2P 39K
573	R642	5135-393522	RES, CBN 1/2P 39K
574	R643	5135-222522	RES, CBN 1/2P 2.2K
574	R644	5135-222522	RES, CBN 1/2P 2.2K
579	R645	5135-330522	RES, CBN 1/2P 33
579	R646	5135-330522	RES, CBN 1/2P 33
579	R647	5135-330522	RES, CBN 1/2P 33
579	R648	5135-330522	RES, CBN 1/2P 33
569	R649	5135-102522	RES, CBN 1/2P 1K
569	R650	5135-102522	RES, CBN 1/2P 1K
569	R651	5135-102522	RES, CBN 1/2P 1K
569	R652	5135-102522	RES, CBN 1/2P 1K
578	R653	5135-474522	RES, CBN 1/2P 470K
578	R654	5135-474522	RES, CBN 1/2P 470K
576	R655	5135-104522	RES, CBN 1/2P 100K
576	R656	5135-104522	RES, CBN 1/2P 100K
577	R657	5135-105522	RES, CBN 1/2P 1M
571	R661	5135-125522	RES, CBN 1/2P 1.2M
571	R662	5135-125522	RES, CBN 1/2P 1.2M
575	R663	5135-121522	RES, CBN 1/2P 120
575	R664	5135-121522	RES, CBN 1/2P 120
575	R665	5135-121522	RES, CBN 1/2P 120
575	R666	5135-121522	RES, CBN 1/2P 120
433	R698	5135-223522	RES, CBN 1/2P 22K
432	R699	5135-270522	RES, CBN 1/2P 27
514	R701	5135-1R0522	RES, CBN 1/2P 1 UA N
514A	R701	5135-100522	RES, CBN 1/2P 10 G
514	R702	5135-1R0522	RES, CBN 1/2P 1 UA N
514A	R702	5135-100522	RES, CBN 1/2P 10 G
507	R703	5135-101522	RES, CBN 1/2P 100
507	R704	5135-101522	RES, CBN 1/2P 100
512	R705	5135-472522	RES, CBN 1/2P 4.7K
512	R706	5135-472522	RES, CBN 1/2P 4.7K
512	R707	5135-472522	RES, CBN 1/2P 4.7K
512	R708	5135-472522	RES, CBN 1/2P 4.7K
509	R709	5135-100522	RES, CBN 1/2P 10
509	R710	5135-100522	RES, CBN 1/2P 10
509	R711	5135-100522	RES, CBN 1/2P 10
509	R712	5135-100522	RES, CBN 1/2P 10
506	R713	5135-561522	RES, CBN 1/2P 560
506	R714	5135-561522	RES, CBN 1/2P 560
506	R715	5135-561522	RES, CBN 1/2P 560
506	R716	5135-561522	RES, CBN 1/2P 560
510	R717	5135-220522	RES, CBN 1/2P 22
510	R718	5135-220522	RES, CBN 1/2P 22
510	R719	5135-220522	RES, CBN 1/2P 22
510	R720	5135-220522	RES, CBN 1/2P 22
511	R721	5135-392522	RES, CBN 1/2P 3.9K
511	R722	5135-392522	RES, CBN 1/2P 3.9K
507	R723	5135-101522	RES, CBN 1/2P 100
507	R724	5135-101522	RES, CBN 1/2P 100
508	R727	5135-121522	RES, CBN 1/2P 120
508	R728	5135-121522	RES, CBN 1/2P 120
515	R729	5135-470522	RES, CBN 1/2P 47
515	R730	5135-470522	RES, CBN 1/2P 47
505	R731	5135-120522	RES, CBN 1/2P 12
505	R732	5135-120522	RES, CBN 1/2P 12
513	R733	5135-331522	RES, CBN 1/2P 330
513	R734	5135-331522	RES, CBN 1/2P 330
466	R737	5135-105522	RES, CBN 1/2P 1M
466	R738	5135-105522	RES, CBN 1/2P 1M
451	R739	5135-103522	RES, CBN 1/2P 10K
451	R740	5135-103522	RES, CBN 1/2P 10K
452	R743	5135-102522	RES, CBN 1/2P 1K
452	R744	5135-102522	RES, CBN 1/2P 1K
451	R745	5135-103522	RES, CBN 1/2P 10K
453	R751	5135-102522	RES, CBN 1/2P 1K
453	R752	5135-102522	RES, CBN 1/2P 1K
453	R753	5135-102522	RES, CBN 1/2P 1K
453	R754	5135-102522	RES, CBN 1/2P 1K
453	R755	5135-102522	RES, CBN 1/2P 1K
453	R756	5135-102522	RES, CBN 1/2P 1K
453	R757	5135-102522	RES, CBN 1/2P 1K
453	R758	5135-102522	RES, CBN 1/2P 1K
453	R759	5135-102522	RES, CBN 1/2P 1K
453	R760	5135-102522	RES, CBN 1/2P 1K
452	R761	5135-102522	RES, CBN 1/2P 1K
452	R762	5135-102522	RES, CBN 1/2P 1K
453	R763	5135-102522	RES, CBN 1/2P 1K
453	R764	5135-102522	RES, CBN 1/2P 1K
452	R765	5135-102522	RES, CBN 1/2P 1K
452	R766	5135-102522	RES, CBN 1/2P 1K
453	R767	5135-102522	RES, CBN 1/2P 1K
453	R768	5135-102522	RES, CBN 1/2P 1K
452	R769	5135-102522	RES, CBN 1/2P 1K
452	R770	5135-102522	RES, CBN 1/2P 1K
453	R771	5135-102522	RES, CBN 1/2P 1K
453	R772	5135-102522	RES, CBN 1/2P 1K
452	R773	5135-102522	RES, CBN 1/2P 1K
452	R774	5135-102522	RES, CBN 1/2P 1K
458	R775	5232-473J16P	RES, CBN 1/6P 47K
458	R776	5232-473J16P	RES, CBN 1/6P 47K
458	R777	5232-473J16P	RES, CBN 1/6P 47K
458	R778	5232-473J16P	RES, CBN 1/6P 47K
455	R779	5232-224J16P	RES, CBN 1/6P 220K
455	R780	5232-224J16P	RES, CBN 1/6P 220K
455	R781	5232-224J16P	RES, CBN 1/6P 220K
450	R782	5212-223J0501	R COMPOSITE 22K
455	R783	5232-224J16P	RES, CBN 1/6P 220K
455	R784	5232-224J16P	RES, CBN 1/6P 220K
459	R785	5232-124J16P	RES, CBN 1/6P 120K
455	R786	5232-224J16P	RES, CBN 1/6P 220K
455	R787	5232-224J16P	RES, CBN 1/6P 220K
450	R788	5212-223J0501	R COMPOSITE 22K
451	R789	5135-103522	RES, CBN 1/2P 10K
455	R790	5232-224J16P	RES, CBN 1/6P 220K
459	R791	5232-124J16P	RES, CBN 1/6P 120K
455	R792	5232-224J16P	RES, CBN 1/6P 220K
455	R794	5232-224J16P	RES, CBN 1/6P 220K
455	R795	5232-224J16P	RES, CBN 1/6P 220K
455	R796	5232-224J16P	RES, CBN 1/6P 220K
455	R797	5232-224J16P	RES, CBN 1/6P 220K
455	R798	5232-224J16P	RES, CBN 1/6P 220K
412	R861	5232-102J16P	RES, CBN 1/6P 1K
412	R862	5232-102J16P	RES, CBN 1/6P 1K
412	R863	5232-102J16P	RES, CBN 1/6P 1K
411	R864	5232-103J16P	RES, CBN 1/6P 10K
413	R865	5232-105J16P	RES, CBN 1/6P 1M
411	R866	5232-103J16P	RES, CBN 1/6P 10K
390	R868	5135-472522	RES, CBN 1/2P 4.7K
426	R869	5135-473522	RES, CBN 1/2P 47K

Ser. No.	Ref. No.	Part No.	Description
425	R870	5135-221522	RES, CBN 1/2P 220
426	R871	5135-473522	RES, CBN 1/2P 47K
427	R872	5135-331522	RES, CBN 1/2P 330
428	R873	5135-100522	RES, CBN 1/2P 10
783	R874	5135-331522	RES, CBN 1/2P 330
785	R875	5135-2R2522	RES, CBN 1/2P 2.2
784	R876	5135-101522	RES, CBN 1/2P 100
782	R877	5135-472522	RES, CBN 1/2P 4.7K
783	R878	5135-331522	RES, CBN 1/2P 330
784	R879	5135-101522	RES, CBN 1/2P 100
786	R880	5135-4R7522	RES, CBN 1/2P 4.7
782	R881	5135-472522	RES, CBN 1/2P 4.7K
413	R882	5232-105J16P	RES, CBN 1/6P 1M
413	R883	5232-105J16P	RES, CBN 1/6P 1M
413	R884	5232-105J16P	RES, CBN 1/6P 1M
413	R885	5232-105J16P	RES, CBN 1/6P 1M
413	R891	5232-105J16P	RES, CBN 1/6P 1M
424	R892	5135-122522	RES, CBN 1/2P 1.2K
411	R893	5232-103J16P	RES, CBN 1/6P 10K
430	R894	5135-105522	RES, CBN 1/2P 1M
429	R895	5135-334522	RES, CBN 1/2P 330K
429	R896	5135-334522	RES, CBN 1/2P 330K
431	R897	5135-104522	RES, CBN 1/2P 100K
389	R898	5135-101522	RES, CBN 1/2P 100
411	R899	5232-103J16P	RES, CBN 1/6P 10K
		INTEGRATED CIRCUITS	
681	IC401	5653-UPC4556C	IC, LINEAR
441	IC755	5654-LC7818	IC, DIGITAL
441	IC756	5654-LC7818	IC, DIGITAL
441	IC757	5654-LC7818	IC, DIGITAL
441	IC758	5654-LC7818	IC, DIGITAL
442	IC851	5654-BA612	IC, DIGITAL
442	IC852	5654-BA612	IC, DIGITAL
393	IC853	5654-TC4514BP	IC, DIGITAL
396	IC854	5654-TC4013BP	IC, DIGITAL
395	IC855	5654-TC4011BP	IC, DIGITAL
397	IC856	5653-LB1641BP	IC, LINEAR
394	IC857	5654-M50117P	IC, DIGITAL
		TRANSISTORS	
694	Q7	5614-667A (C)	XISTOR, NPN A
695	Q8	5612-647A (C)	XISTOR, PNP A
742	Q91	5612-1015 (O) or (Y)	XISTOR, PNP A
741	Q92	5614-1406 (O) or (Y)	XISTOR, NPN A
743	Q93	5613-2603 (F) or (E)	XISTOR, NPN R
744	Q94	5611-1115 (F) or (E)	XISTOR, PNP R
745	Q95	5616-2SK246 (GR)	FET, N-CH
745	Q96	5616-2SK246 (GR)	FET, N-CH
743	Q97	5613-2603 (F) or (E)	XISTOR, NPN R
744	Q98	5611-1115 (F) or (E)	XISTOR, PNP R
531	Q601	5613-2240 (BL)	XISTOR, NPN R
531	Q602	5613-2240 (BL)	XISTOR, NPN R
532	Q603	5611-970 (BL)	XISTOR, PNP R
532	Q604	5611-970 (BL)	XISTOR, PNP R
531	Q605	5613-2240 (BL)	XISTOR, NPN R
531	Q606	5613-2240 (BL)	XISTOR, NPN R
532	Q607	5611-970 (BL)	XISTOR, PNP R
532	Q608	5611-970 (BL)	XISTOR, PNP R
533	Q609	5613-2320L (F)	XISTOR, NPN R
533	Q610	5613-2320L (F)	XISTOR, NPN R
534	Q611	5611-999L (F)	XISTOR, PNP R
534	Q612	5611-999L (F)	XISTOR, PNP R
535	Q613	5612-646 (C)	XISTOR, PNP A
535	Q614	5612-646 (C)	XISTOR, PNP A
536	Q615	5614-666 (C)	XISTOR, NPN A
536	Q616	5614-666 (C)	XISTOR, NPN A
537	Q617	5614-667 (C)	XISTOR, NPN A
537	Q618	5614-667 (C)	XISTOR, NPN A
538	Q619	5612-647 (C)	XISTOR, PNP A
538	Q620	5612-647 (C)	XISTOR, PNP A
539	Q621	5616-2SK364 (BL) or (V)	FET, N-CH
539	Q622	5616-2SK364 (BL) or (V)	FET, N-CH
386	Q698	5614-667A (C)	XISTOR, NPN A
386	Q699	5614-667A (C)	XISTOR, NPN A
502	Q701	5611-1190 (E)	XISTOR, PNP R
502	Q702	5611-1190 (E)	XISTOR, PNP R
501	Q703	5613-2855 (D)	XISTOR, NPN R
501	Q704	5613-2855 (D)	XISTOR, NPN R
501	Q705	5613-2855 (D)	XISTOR, NPN R
501	Q706	5613-2855 (D)	XISTOR, NPN R
502	Q707	5611-1190 (E)	XISTOR, PNP R
502	Q708	5611-1190 (E)	XISTOR, PNP R
517	Q709	5614-667A (C)	XISTOR, NPN A
518	Q710	5612-647A (C)	XISTOR, PNP A
503	Q711	5616-2SK246 (GR)	FET, N-CH
503	Q712	5616-2SK246 (GR)	FET, N-CH
447	Q751	5613-RN1203	XISTOR, NPN R
447	Q752	5613-RN1203	XISTOR, NPN R
447	Q753	5613-RN1203	XISTOR, NPN R
447	Q754	5613-RN1203	XISTOR, NPN R
445	Q756	5611-1115 (E) or (F)	XISTOR, PNP R
444	Q761	5616-2SK364 (BL) or (V)	FET, N-CH
444	Q762	5616-2SK364 (BL) or (V)	FET, N-CH
444	Q763	5616-2SK364 (BL) or (V)	FET, N-CH
444	Q764	5616-2SK364 (BL) or (V)	FET, N-CH
444	Q765	5616-2SK364 (BL) or (V)	FET, N-CH
444	Q766	5616-2SK364 (BL) or (V)	FET, N-CH
444	Q767	5616-2SK364 (BL) or (V)	FET, N-CH
444	Q768	5616-2SK364 (BL) or (V)	FET, N-CH
443	Q851	5611-RN2203	XISTOR, PNP R
443	Q852	5611-RN2203	XISTOR, PNP R
443	Q853	5611-RN2203	XISTOR, PNP R
443	Q854	5611-RN2203	XISTOR, PNP R
443	Q855	5611-RN2203	XISTOR, PNP R
443	Q856	5611-RN2203	XISTOR, PNP R
443	Q857	5611-RN2203	XISTOR, PNP R
443	Q858	5611-RN2203	XISTOR, PNP R
443	Q859	5611-RN2203	XISTOR, PNP R
443	Q860	5611-RN2203	XISTOR, PNP R
443	Q861	5611-RN2203	XISTOR, PNP R
386	Q862	5614-667A (C)	XISTOR, NPN A
404	Q863	5613-2603 (E) or (F)	XISTOR, NPN R
404	Q864	5613-2603 (E) or (F)	XISTOR, NPN R
771	Q865	5612-1015 (O) or (Y)	XISTOR, PNP A
772	Q866	5613-2603 (E) or (F)	XISTOR, NPN R
772	Q867	5613-2603 (E) or (F)	XISTOR, NPN R
772	Q868	5613-2603 (E) or (F)	XISTOR, NPN R
771	Q869	5612-1015 (O) or (Y)	XISTOR, PNP A
772	Q870	5613-2603 (E) or (F)	XISTOR, NPN R
403	Q871	5611-1115 (E) or (F)	XISTOR, PNP R
421	Q891	5613-RN1203	XISTOR, NPN R
419	Q892	5611-1115 (E) or (F)	XISTOR, PNP R
421	Q893	5613-RN1203	XISTOR, NPN R
418	Q895	5616-2SK364 (BL) or (V)	FET, N-CH
418	Q896	5616-2SK364 (BL) or (V)	FET, N-CH
		DIODES	
697	D9	5635-HZ15-1L	DIODE, ZENER
697	D10	5635-HZ15-1L	DIODE, ZENER
747	D91	5635-HZ20-1L	DIODE, ZENER
747	D92	5635-HZ20-1L	DIODE, ZENER
541	D601	5641-MV103	VARISTOR
541	D602	5641-MV103	VARISTOR
520	D701	5635-HZ15-1L	DIODE, ZENER
520	D702	5635-HZ15-1L	DIODE, ZENER
446	D751	5631-1SS133	DIODE, DET
446	D752	5631-1SS133	DIODE, DET
446	D753	5631-1SS133	DIODE, DET
446	D754	5631-1SS133	DIODE, DET
446	D755	5631-1SS133	DIODE, DET
446	D756	5631-1SS133	DIODE, DET
446	D757	5631-1SS133	DIODE, DET
446	D758	5631-1SS133	DIODE, DET
446	D759	5631-1SS133	DIODE, DET
446	D760	5631-1SS133	DIODE, DET
446	D781	5631-1SS133	DIODE, DET
446	D782	5631-1SS133	DIODE, DET
446	D783	5631-1SS133	DIODE, DET
446	D784	5631-1SS133	DIODE, DET
446	D785	5631-1SS133	DIODE, DET

Ser. No.	Ref. No.	Part No.	Description
446	D786	5631-1SS133	DIODE, DET
446	D787	5631-1SS133	DIODE, DET
446	D788	5631-1SS133	DIODE, DET
401	D851	5635-RD2R7EB2	DIODE, ZENER
387	D852	5635-RD5R6EB2	DIODE, ZENER
402	D853	5635-RD5R6EB2	DIODE, ZENER
775	D854	5635-RD13EB2	DIODE, ZENER
775	D855	5635-RD13EB2	DIODE, ZENER
422	D892	5631-1SS133	DIODE, DET
422	D893	5631-1SS133	DIODE, DET
422	D895	5631-1SS133	DIODE, DET
422	D896	5631-1SS133	DIODE, DET
		CONTROLS	
812	VR507	5113-50343122	RES, V CBN 16 50K
812	VR508	5113-50343122	RES, V CBN 16 50K
		MISCELLANEOUS	
831	J11	4484-49	PIN JACK, 4P
831	J12	4484-49	PIN JACK, 4P
831	J13	4484-49	PIN JACK, 4P
831	J14	4484-49	PIN JACK, 4P
831	J15	4484-49	PIN JACK, 4P
831	J16	4484-49	PIN JACK, 4P
831	J17	4484-49	PIN JACK, 4P
920	JL701	4242-R0104600	JUMPER LEAD
872	JL702	4242-R0103101	JUMPER LEAD
870	JL703	4242-R0406161	JUMPER LEAD
883	JL704	4242-R0403301	JUMPER LEAD
869	JL710	4242-R0405161	JUMPER LEAD
885	JL714	4242-R0403601	JUMPER LEAD
045A	L701	5597-45502	CORE, BEADS (G)
045A	L702	5597-45502	CORE, BEADS (G)
045A	L703	5597-45502	CORE, BEADS (G)
045A	L704	5597-45502	CORE, BEADS (G)
889	CN701	4443-0701140	CONNECTOR
889	CN702	4443-0701140	CONNECTOR
916	CN705	4443-030185	CONNECTOR
861	CN707	4443-040185	CONNECTOR
887	CN708	4443-0501140	CONNECTOR
886	CN709	4443-0401140	CONNECTOR
863	CN711	4443-060185	CONNECTOR
888	CN712	4443-0601140	CONNECTOR
888	CN713	4443-0601140	CONNECTOR
916	CN715	4443-030185	CONNECTOR
878	LCN720	4163-0116020	CONNECTOR W/W
878	LCN721	4163-0116020	CONNECTOR W/W
877	LCN722	4163-0125020	CONNECTOR W/W
400	CS851	5693-CSB455E	OSC, CER
801	SW701	4411-204724	ROTARY SWITCH
801	SW702	4411-204724	ROTARY SWITCH
808	SW703	4422-70214	REMOTE SWITCH
874	LCN1	4132-R0100251	CORD, 2C
874	LCN2	4132-R0100251	CORD, 2C
865		2240-Z051	HOLDER
867		2240-Z031	HOLDER
876		2240-Z061	HOLDER

PCB-2 HEADPHONE JACK P.C. BOARD

		MISCELLANEOUS	
820	J1	4451-00161	JACK, 1P

PCB-3 VOLUME CONTROL P.C. BOARD

		CONTROLS	
810	VR505	6161-00301	VR BLOCK
810	VR506	6161-00301	VR BLOCK
		MISCELLANEOUS	
915	CN706	4443-030185	CONNECTOR

Ser. No.	Ref. No.	Part No.	Description

PCB-4 FUNCTION SWITCH P.C. BOARD

		CAPACITORS	
827	C773	5345-106C0951	CAP, MINI ELE 10μ/16V
827	C774	5345-106C0951	CAP, MINI ELE 10μ/16V
827	C775	5345-106C0951	CAP, MINI ELE 10μ/16V
827	C776	5345-106C0951	CAP, MINI ELE 10μ/16V
		RESISTORS	
464	R851	5135-102522	RES, CBN 1/2P 1K
464	R852	5135-102522	RES, CBN 1/2P 1K
464	R853	5135-102522	RES, CBN 1/2P 1K
464	R854	5135-102522	RES, CBN 1/2P 1K
464	R855	5135-102522	RES, CBN 1/2P 1K
465	R856	5135-182522	RES, CBN 1/2P 1.8K
465	R857	5135-182522	RES, CBN 1/2P 1.8K
465	R858	5135-182522	RES, CBN 1/2P 1.8K
465	R859	5135-182522	RES, CBN 1/2P 1.8K
465	R860	5135-182522	RES, CBN 1/2P 1.8K
		DIODES	
822	D761	5637-GL5EG41	LED
822	D762	5637-GL5EG41	LED
822	D763	5637-GL5EG41	LED
822	D764	5637-GL5EG41	LED
822	D765	5637-GL5EG41	LED
822	D766	5637-GL5EG41	LED
822	D767	5637-GL5EG41	LED
822	D768	5637-GL5EG41	LED
822	D769	5637-GL5EG41	LED
822	D770	5637-GL5EG41	LED
823	D771	5631-1SS133	DIODE, DET
823	D772	5631-1SS133	DIODE, DET
823	D773	5631-1SS133	DIODE, DET
		MISCELLANEOUS	
807	SW760	4431-A017163	SWITCH, PUSH
807	SW761	4431-A017163	SWITCH, PUSH
807	SW762	4431-A017163	SWITCH, PUSH
807	SW763	4431-A017163	SWITCH, PUSH
807	SW764	4431-A017163	SWITCH, PUSH
807	SW765	4431-A017163	SWITCH, PUSH
807	SW766	4431-A017163	SWITCH, PUSH
807	SW767	4431-A017163	SWITCH, PUSH
807	SW768	4431-A017163	SWITCH, PUSH
807	SW769	4431-A017163	SWITCH, PUSH
884	LCN701	4163-01407007	CONNECTOR W/W
884	LCN702	4163-01407007	CONNECTOR W/W

PCB-5 MUTE INDICATOR P.C. BOARD

		DIODE	
417	D894	5637-GL5HD10	LED

PCB-6 TONE CONTROL P.C. BOARD

		CAPACITORS	
794	⚠C1	5352-1030961	CAP, MTL .01μ (UA) (N)
794A	⚠C1	5352-1030958	CAP, MTL .01μ (G)
791	C2	5345-477F041	CAP, MINI ELE 470μ/50V
795	C3	5352-1041957	CAP, MTL .1μ
795	C4	5352-1041957	CAP, MTL .1μ
793	C5	5341-S09FM688	CAP, ELE 6800μ/50V
792	C6	5341-478F0955	CAP, ELE 4700μ/50V
765	C7	5345-337D041	CAP, MINI ELE 330μ/25V
765	C8	5345-337D041	CAP, MINI ELE 330μ/25V
766	C12	5345-228D041	CAP, MINI ELE 2200μ/25V
721	C15	5345-476C0951	CAP, MINI ELE 47μ/16V
766	C16	5345-228D041	CAP, MINI ELE 2200μ/25V
383	C17	5345-477D041	CAP, MINI ELE 470μ/25V
720	C18	5345-106C0951	CAP, MINI ELE 10μ/16V
720	C19	5345-106C0951	CAP, MINI ELE 10μ/16V
722	C20	5354-104593	CAP, MYL .1μ
601	C51	5345-337C041	CAP, MINI ELE 330μ/16V

Ser. No.	Ref. No.	Part No.	Description
601	C52	5345-337C041	CAP, MINI ELE 330 μ/16V
601	C53	5345-337C041	CAP, MINI ELE 330 μ/16V
601	C54	5345-337C041	CAP, MINI ELE 330 μ/16V
764	C55	5345-228D041	CAP, MINI ELE 2200 μ/25V
764	C56	5345-228D041	CAP, MINI ELE 2200 μ/25V
764	C57	5345-228D041	CAP, MINI ELE 2200 μ/25V
764	C58	5345-228D041	CAP, MINI ELE 2200 μ/25V
629	C501	5345-106C0951	CAP, MINI ELE 10 μ/16V
629	C502	5345-106C0951	CAP, MINI ELE 10 μ/16V
632	C503	5345-107B0951	CAP, MINI ELE 100 μ/10V
632	C504	5345-107B0951	CAP, MINI ELE 100 μ/10V
637	C507	5353-010934	CAP, MCA 1p
637	C508	5353-010934	CAP, MCA 1p
631	C509	5345-107B0951	CAP, MINI ELE 100 μ/10V
631	C510	5345-107B0951	CAP, MINI ELE 100 μ/10V
640	C511	5354-183J1HM	CAP, MYL .018 μ
640	C512	5354-183J1HM	CAP, MYL .018 μ
639	C513	5354-104593	CAP, MYL .1 μ
639	C514	5354-104593	CAP, MYL .1 μ
640	C515	5354-183J1HM	CAP, MYL .018 μ
640	C516	5354-183J1HM	CAP, MYL .018 μ
643	C517	5354-182J1HM	CAP, MYL 1800p
642	C518	5354-682J1HM	CAP, MYL 6800p
642	C519	5354-682J1HM	CAP, MYL 6800p
643	C520	5354-182J1HM	CAP, MYL 1800p
639	C521	5354-104593	CAP, MYL .1 μ
639	C522	5354-104593	CAP, MYL .1 μ
644	C523	5354-123J1HM	CAP, MYL .012 μ
644	C524	5354-123J1HM	CAP, MYL .012 μ
641	C525	5354-393J1HM	CAP, MYL .039 μ
641	C526	5354-393J1HM	CAP, MYL .039 μ
630	C527	5345-226D0951	CAP, MINI ELE 22 μ/25V
630	C528	5345-226D0951	CAP, MINI ELE 22 μ/25V
631	C529	5345-107B0951	CAP, MINI ELE 100 μ/10V
631	C530	5345-107B0951	CAP, MINI ELE 100 μ/10V
635	C551	5353-101534	CAP, MCA 100p UA N
635A	C551	5359-4715851	CAP, PPP 470p G
635	C552	5353-101534	CAP, MCA 100p UA N
635A	C552	5359-4715851	CAP, PPP 470p G
645	C553	5354-394593	CAP, MYL .39 μ
645	C554	5354-394593	CAP, MYL .39 μ
647	C555	5354-103J1HM	CAP, MYL .01 μ
647	C556	5354-103J1HM	CAP, MYL .01 μ
603	C903	5354-154593	CAP, MYL .15 μ
603	C904	5354-154593	CAP, MYL .15 μ
600	C905	5345-476D041	CAP, MINI ELE 47 μ/25V
600	C906	5345-476D041	CAP, MINI ELE 47 μ/25V
604	C907	5354-334593	CAP, MYL .33 μ
604	C908	5354-334593	CAP, MYL .33 μ
599	C909	5345-226D0951	CAP, MINI ELE 22 μ/25V
599	C910	5345-226D0951	CAP, MINI ELE 22 μ/25V
598	C919	5345-474F0951	CAP, MINI ELE .47 μ/50V
598	C920	5345-474F0951	CAP, MINI ELE .47 μ/50V
		RESISTORS	
769	R3	5135-331522	RES, CBN 1/2P 330
769	R4	5135-331522	RES, CBN 1/2P 330
768	R5	5135-101522	RES, CBN 1/2P 100
768	R6	5135-101522	RES, CBN 1/2P 100
731	R11	5135-222522	RES, CBN 1/2P 2.2K
723	R12	5135-102522	RES, CBN 1/2P 1K
725	R13	5135-474522	RES, CBN 1/2P 470K
731	R14	5135-222522	RES, CBN 1/2P 2.2K
729	R15	5135-104522	RES, CBN 1/2P 100K
724	R16	5135-103522	RES, CBN 1/2P 10K
724	R18	5135-103522	RES, CBN 1/2P 10K
730	R19	5135-684522	RES, CBN 1/2P 680K
391	R20	5135-102522	RES, CBN 1/2P 1K
726	R21	5135-271522	RES, CBN 1/2P 270
726	R22	5135-271522	RES, CBN 1/2P 270
052A	R23	5135-222522	RES, CBN 1/2P 2.2K G
052A	R24	5135-222522	RES, CBN 1/2P 2.2K G
762	R25	5135-472522	RES, CBN 1/2P 4.7K
762	R26	5135-472522	RES, CBN 1/2P 4.7K
767	R27	5135-4R7522	RES, CBN 1/2P 4.7
767	R28	5135-4R7522	RES, CBN 1/2P 4.7
727	R33	5135-472522	RES, CBN 1/2P 4.7K
615	R51	5135-182522	RES, CBN 1/2P 1.8K
615	R52	5135-182522	RES, CBN 1/2P 1.8K
617	R53	5135-101522	RES, CBN 1/2P 100
617	R54	5135-101522	RES, CBN 1/2P 100
770	R55	5135-220522	RES, CBN 1/2P 22
770	R56	5135-220522	RES, CBN 1/2P 22
770	R57	5135-220522	RES, CBN 1/2P 22
770	R58	5135-220522	RES, CBN 1/2P 22
668	R501	5135-331522	RES, CBN 1/2P 330
668	R502	5135-331522	RES, CBN 1/2P 330
654	R505	5135-394522	RES, CBN 1/2P 390K
654	R506	5135-394522	RES, CBN 1/2P 390K
652	R507	5135-182522	RES, CBN 1/2P 1.8K
652	R508	5135-182522	RES, CBN 1/2P 1.8K
652	R509	5135-182522	RES, CBN 1/2P 1.8K
652	R510	5135-182522	RES, CBN 1/2P 1.8K
652	R511	5135-182522	RES, CBN 1/2P 1.8K
652	R512	5135-182522	RES, CBN 1/2P 1.8K
652	R513	5135-182522	RES, CBN 1/2P 1.8K
652	R514	5135-182522	RES, CBN 1/2P 1.8K
656	R515	5135-103522	RES, CBN 1/2P 10K
656	R516	5135-103522	RES, CBN 1/2P 10K
656	R517	5135-103522	RES, CBN 1/2P 10K
656	R518	5135-103522	RES, CBN 1/2P 10K
655	R519	5135-271522	RES, CBN 1/2P 270
655	R520	5135-271522	RES, CBN 1/2P 270
655	R521	5135-271522	RES, CBN 1/2P 270
655	R522	5135-271522	RES, CBN 1/2P 270
655	R523	5135-271522	RES, CBN 1/2P 270
655	R524	5135-271522	RES, CBN 1/2P 270
655	R525	5135-271522	RES, CBN 1/2P 270
655	R526	5135-271522	RES, CBN 1/2P 270
657	R527	5135-153522	RES, CBN 1/2P 15K
657	R528	5135-153522	RES, CBN 1/2P 15K
658	R529	5135-473522	RES, CBN 1/2P 47K
658	R530	5135-473522	RES, CBN 1/2P 47K
659	R531	5135-274522	RES, CBN 1/2P 270K
659	R532	5135-274522	RES, CBN 1/2P 270K
664	R533	5135-181522	RES, CBN 1/2P 180
664	R534	5135-181522	RES, CBN 1/2P 180
664	R535	5135-181522	RES, CBN 1/2P 180
664	R536	5135-181522	RES, CBN 1/2P 180
668	R537	5135-331522	RES, CBN 1/2P 330
668	R538	5135-331522	RES, CBN 1/2P 330
657	R539	5135-153522	RES, CBN 1/2P 15K
657	R540	5135-153522	RES, CBN 1/2P 15K
661	R543	5135-122522	RES, CBN 1/2P 1.2K
661	R544	5135-122522	RES, CBN 1/2P 1.2K
662	R545	5135-121522	RES, CBN 1/2P 120
662	R546	5135-121522	RES, CBN 1/2P 120
651	R547	5135-331522	RES, CBN 1/2P 330
651	R548	5135-331522	RES, CBN 1/2P 330
672	R549	5135-335522	RES, CBN 1/2P 3.3M
672	R550	5135-335522	RES, CBN 1/2P 3.3M
663	R551	5135-122522	RES, CBN 1/2P 1.2K
663	R552	5135-122522	RES, CBN 1/2P 1.2K
672	R553	5135-335522	RES, CBN 1/2P 3.3M
672	R554	5135-335522	RES, CBN 1/2P 3.3M
648	R555	5135-331522	RES, CBN 1/2P 330 UA N
648A	R555	5135-102522	RES, CBN 1/2P 1K G
648	R556	5135-331522	RES, CBN 1/2P 330 UA N
648A	R556	5135-102522	RES, CBN 1/2P 1K G
649	R557	5135-105522	RES, CBN 1/2P 1M
649	R558	5135-105522	RES, CBN 1/2P 1M
669	R559	5135-683522	RES, CBN 1/2P 68K
669	R560	5135-683522	RES, CBN 1/2P 68K
666	R561	5135-392522	RES, CBN 1/2P 3.9K
666	R562	5135-392522	RES, CBN 1/2P 3.9K
671	R563	5135-105522	RES, CBN 1/2P 1M
671	R564	5135-105522	RES, CBN 1/2P 1M
671	R565	5135-105522	RES, CBN 1/2P 1M
671	R566	5135-105522	RES, CBN 1/2P 1M
671	R567	5135-105522	RES, CBN 1/2P 1M

Ser. No.	Ref. No.	Part No.	Description
671	R568	5135-105522	RES, CBN 1/2P 1M
660	R569	5135-272522	RES, CBN 1/2P 2.7K
660	R570	5135-272522	RES, CBN 1/2P 2.7K
672	R571	5135-335522	RES, CBN 1/2P 3.3M
672	R572	5135-335522	RES, CBN 1/2P 3.3M
668	R573	5135-331522	RES, CBN 1/2P 330
668	R574	5135-331522	RES, CBN 1/2P 330
618	R901	5135-473522	RES, CBN 1/2P 47K
618	R902	5135-473522	RES, CBN 1/2P 47K
607	R903	5135-102522	RES, CBN 1/2P 1K
607	R904	5135-102522	RES, CBN 1/2P 1K
608	R905	5135-154522	RES, CBN 1/2P 150K
608	R906	5135-154522	RES, CBN 1/2P 150K
618	R907	5135-473522	RES, CBN 1/2P 47K
618	R908	5135-473522	RES, CBN 1/2P 47K
607	R909	5135-102522	RES, CBN 1/2P 1K
607	R910	5135-102522	RES, CBN 1/2P 1K
609	R911	5135-332522	RES, CBN 1/2P 3.3K
609	R912	5135-332522	RES, CBN 1/2P 3.3K
609	R913	5135-332522	RES, CBN 1/2P 3.3K
609	R914	5135-332522	RES, CBN 1/2P 3.3K
610	R915	5135-183522	RES, CBN 1/2P 18K
610	R916	5135-183522	RES, CBN 1/2P 18K
616	R917	5135-472522	RES, CBN 1/2P 4.7K
616	R918	5135-472522	RES, CBN 1/2P 4.7K
611	R919	5135-562522	RES, CBN 1/2P 5.6K
611	R920	5135-562522	RES, CBN 1/2P 5.6K
609	R921	5135-332522	RES, CBN 1/2P 3.3K
609	R922	5135-332522	RES, CBN 1/2P 3.3K
610	R923	5135-183522	RES, CBN 1/2P 18K
610	R924	5135-183522	RES, CBN 1/2P 18K
612	R925	5135-331522	RES, CBN 1/2P 330
612	R926	5135-331522	RES, CBN 1/2P 330
609	R927	5135-332522	RES, CBN 1/2P 3.3K
609	R928	5135-332522	RES, CBN 1/2P 3.3K
613	R929	5135-221522	RES, CBN 1/2P 220
613	R930	5135-221522	RES, CBN 1/2P 220
612	R931	5135-331522	RES, CBN 1/2P 330
612	R932	5135-331522	RES, CBN 1/2P 330
614	R933	5135-104522	RES, CBN 1/2P 100K
614	R934	5135-104522	RES, CBN 1/2P 100K
		INTEGRATED CIRCUIT	
714	IC1	5654-TC4069BP	IC, DIGITAL
		TRANSISTORS	
758	Q1	5612-1015 (O) or (Y)	XISTOR, PNP A
757	Q2	5614-1406 (O) or (Y)	XISTOR, NPN A
759	Q3	5613-2603 (F) or (E)	XISTOR, NPN R
760	Q4	5611-1115 (F) or (E)	XISTOR, PNP R
719	Q10	5613-RN1203	XISTOR, NPN R
711	Q11	5614-667A (C)	XISTOR, NPN A
385	Q12	5613-3246 (H)	XISTOR, NPN R
713	Q13	5611-RN2203	XISTOR, PNP R
712	Q14	5611-1115 (F) or (E)	XISTOR, PNP R
759	Q15	5613-2603 (F) or (E)	XISTOR, NPN R
760	Q16	5611-1115 (F) or (E)	XISTOR, PNP R
593	Q51	5614-667A (C)	XISTOR, NPN A
594	Q52	5612-647A (C)	XISTOR, PNP A
621	Q501	5613-2240 (BL)	XISTOR, NPN R
621	Q502	5613-2240 (BL)	XISTOR, NPN R
622	Q503	5611-970 (BL)	XISTOR, PNP R
622	Q504	5611-970 (BL)	XISTOR, PNP R
621	Q505	5613-2240 (BL)	XISTOR, NPN R
621	Q506	5613-2240 (BL)	XISTOR, NPN R
622	Q507	5611-970 (BL)	XISTOR, PNP R
622	Q508	5611-970 (BL)	XISTOR, PNP R
623	Q509	5613-2320L (F)	XISTOR, NPN R
623	Q510	5613-2320L (F)	XISTOR, NPN R
624	Q511	5611-999L (F)	XISTOR, PNP R
624	Q512	5611-999L (F)	XISTOR, PNP R
625	Q513	5612-646A (C)	XISTOR, PNP A
625	Q514	5612-646A (C)	XISTOR, PNP A
626	Q515	5614-666A (C)	XISTOR, NPN A
626	Q516	5614-666A (C)	XISTOR, NPN A
591	Q901	5613-2603 (F) or (E)	XISTOR, NPN R
591	Q902	5613-2603 (F) or (E)	XISTOR, NPN R
592	Q903	5611-1115 (F) or (E)	XISTOR, PNP R
592	Q904	5611-1115 (F) or (E)	XISTOR, PNP R
592	Q905	5611-1115 (F) or (E)	XISTOR, PNP R
592	Q906	5611-1115 (F) or (E)	XISTOR, PNP R
591	Q907	5613-2603 (F) or (E)	XISTOR, NPN R
591	Q908	5613-2603 (F) or (E)	XISTOR, NPN R
		DIODES	
790	⚠D1	5632-10DF2	DIODE, RECT
790	⚠D2	5632-10DF2	DIODE, RECT
790	⚠D3	5632-10DF2	DIODE, RECT
790	⚠D4	5632-10DF2	DIODE, RECT
773	D5	5632-10DF2	DIODE, RECT
773	D6	5632-10DF2	DIODE, RECT
763	D7	5635-HZ20-1L	DIODE, ZENER
763	D8	5635-HZ20-1L	DIODE, ZENER
384	D11	5632-10DF2	DIODE, RECT
717	D12	5631-1S2473	DIODE, DET
715	D13	5635-RD5R6EB2	DIODE, ZENER
384	D14	5632-10DF2	DIODE, RECT
716	D15	5636-1S2471	DIODE, SWITCH
716	D16	5636-1S2471	DIODE, SWITCH
717	D17	5631-1S2473	DIODE, DET
384	D18	5632-10DF2	DIODE, RECT
596	D51	5635-HZ15-1L	DIODE, ZENER
596	D52	5635-HZ15-1L	DIODE, ZENER
717	D891	5631-1S2473	DIODE, DET
		TRANSFORMER	
381	⚠T2	5584-702550	XFORMER, POWER UA
381A	⚠T2	5584-701550	XFORMER, POWER G
381B	⚠T2	5584-703550	XFORMER, POWER N
		CONTROLS	
814	VR501	5113-10449122	RES, V CBN 16 100K
814	VR502	5113-10449122	RES, V CBN 16 100K
816	VR503	5113-50350122	RES, V CBN 16 50K
816	VR504	5113-50350122	RES, V CBN 16 50K
		MISCELLANEOUS	
797	⚠F1	5732-122031	FUSE UA
797A	⚠F1	5732-122030	FUSE G
797B	⚠F1	5732-122036	FUSE N
797	⚠F2	5732-122031	FUSE UA
797A	⚠F2	5732-122030	FUSE G
797B	⚠F2	5732-122036	FUSE N
798	⚠HL1	4472-0131	HOLDER, FUSE
798	⚠HL2	4472-0131	HOLDER, FUSE
798	⚠HL3	4472-0131	HOLDER, FUSE
798	⚠HL4	4472-0131	HOLDER, FUSE
832	J3	4482-7136	PIN JACK, 2P
718	RL1	4331-2024736	RELAY, DC
800	TM101	4214-11023	TERMINAL
800	TM102	4214-11023	TERMINAL
799	TM103	4214-11033	TERMINAL
804	SW501	4431-S0603416	PUSH SWITCH
804	SW502	4431-S0603416	PUSH SWITCH
804	SW503	4431-S0603416	PUSH SWITCH
804	SW504	4431-S0603416	PUSH SWITCH
805	SW505	4462-00301043	LEVER SWITCH
805	SW506	4462-00301043	LEVER SWITCH
879	LCN718	4163-0160020	CONNECTOR W/W
879	LCN719	4163-0160020	CONNECTOR W/W
890	CN703	4443-060185	CONNECTOR
917	CN704	4443-030185	CONNECTOR
862	CN710	4443-050185	CONNECTOR
917	CN714	4443-030185	CONNECTOR
382	⚠S1	4331-10120237	RELAY, DC
875	LCN4	4132-R0100161	CORD, 2C
919		2240-Z031	HOLDER

PCB-7 VIDEO P.C. BOARD

		CAPACITORS	
477	C801	5345-107C041	CAP, MINI ELE 100μ/16V
477	C802	5345-107C041	CAP, MINI ELE 100μ/16V

Ser. No.	Ref. No.	Part No.	Description
477	C803	5345-107C041	CAP, MINI ELE 100μ/16V
477	C804	5345-107C041	CAP, MINI ELE 100μ/16V
477	C805	5345-107C041	CAP, MINI ELE 100μ/16V
477	C806	5345-107C041	CAP, MINI ELE 100μ/16V
477	C807	5345-107C041	CAP, MINI ELE 100μ/16V
477	C808	5345-107C041	CAP, MINI ELE 100μ/16V
477	C809	5345-107C041	CAP, MINI ELE 100μ/16V
476	C810	5345-477C041	CAP, MINI ELE 470μ/16V
476	C811	5345-477C041	CAP, MINI ELE 470μ/16V
476	C812	5345-477C041	CAP, MINI ELE 470μ/16V
477	C813	5345-107C041	CAP, MINI ELE 100μ/16V
477	C814	5345-107C041	CAP, MINI ELE 100μ/16V
047A	C864	5359-1015851	CAP, PPP 100p G
047A	C865	5359-1015851	CAP, PPP 100p G
047A	C866	5359-1015851	CAP, PPP 100p G
047A	C867	5359-1015851	CAP, PPP 100p G
		RESISTORS	
479	R801	5135-221522	RES, CBN 1/2P 220
479A	R801	5135-102522	RES, CBN 1/2P 1K G
479	R802	5135-221522	RES, CBN 1/2P 220
479A	R802	5135-102522	RES, CBN 1/2P 1K G
478	R803	5135-750522	RES, CBN 1/2P 75
481	R804	5135-393522	RES, CBN 1/2P 39K
482	R805	5135-683522	RES, CBN 1/2P 68K
478	R806	5135-750522	RES, CBN 1/2P 75
479	R807	5135-221522	RES, CBN 1/2P 220
479A	R807	5135-102522	RES, CBN 1/2P 1K G
479	R808	5135-221522	RES, CBN 1/2P 220
479A	R808	5135-102522	RES, CBN 1/2P 1K G
481	R809	5135-393522	RES, CBN 1/2P 39K
482	R810	5135-683522	RES, CBN 1/2P 68K
482	R811	5135-683522	RES, CBN 1/2P 68K
481	R812	5135-393522	RES, CBN 1/2P 39K
481	R813	5135-393522	RES, CBN 1/2P 39K
482	R814	5135-683522	RES, CBN 1/2P 68K
482	R815	5135-683522	RES, CBN 1/2P 68K
482	R816	5135-683522	RES, CBN 1/2P 68K
482	R817	5135-683522	RES, CBN 1/2P 68K
482	R818	5135-683522	RES, CBN 1/2P 68K
481	R819	5135-393522	RES, CBN 1/2P 39K
481	R820	5135-393522	RES, CBN 1/2P 39K
479	R821	5135-221522	RES, CBN 1/2P 220
479A	R821	5135-102522	RES, CBN 1/2P 1K G
481	R822	5135-393522	RES, CBN 1/2P 39K
481	R823	5135-393522	RES, CBN 1/2P 39K
483	R824	5135-103522	RES, CBN 1/2P 10K
488	R826	5135-181522	RES, CBN 1/2P 180
486	R827	5135-221522	RES, CBN 1/2P 220
487	R828	5135-271522	RES, CBN 1/2P 270
480	R829	5135-680522	RES, CBN 1/2P 68
483	R831	5135-103522	RES, CBN 1/2P 10K
488	R832	5135-181522	RES, CBN 1/2P 180
486	R833	5135-221522	RES, CBN 1/2P 220
487	R834	5135-271522	RES, CBN 1/2P 270
478	R835	5135-750522	RES, CBN 1/2P 75
479	R836	5135-221522	RES, CBN 1/2P 220
479A	R836	5135-102522	RES, CBN 1/2P 1K G
480	R837	5135-680522	RES, CBN 1/2P 68
483	R839	5135-103522	RES, CBN 1/2P 10K
488	R840	5135-181522	RES, CBN 1/2P 180
486	R841	5135-221522	RES, CBN 1/2P 220
487	R842	5135-271522	RES, CBN 1/2P 270
480	R843	5135-680522	RES, CBN 1/2P 68
484	R846	5135-332522	RES, CBN 1/2P 3.3K
485	R847	5135-182522	RES, CBN 1/2P 1.8K
478	R848	5135-750522	RES, CBN 1/2P 75
		INTEGRATED CIRCUITS	
472	IC801	5652-BA7001	IC, MONO
472	IC802	5652-BA7001	IC, MONO
471	IC803	5654-LC4966	IC, DIGITAL
471	IC804	5654-LC4966	IC, DIGITAL
		TRANSISTORS	
474	Q801	5613-2603 (E) or (F)	XISTOR, NPN R
475	Q802	5611-1115 (E) or (F)	XISTOR, PNP R
474	Q803	5613-2603 (E) or (F)	XISTOR, NPN R
475	Q804	5611-1115 (E) or (F)	XISTOR, PNP R
474	Q805	5613-2603 (E) or (F)	XISTOR, NPN R
475	Q806	5611-1115 (E) or (F)	XISTOR, PNP R
		DIODES	
473	D801	5631-1SS133	DIODE, DET
473	D802	5631-1SS133	DIODE, DET
		MISCELLANEOUS	
842	J20	4489-00601003	PIN JACK, MLT
843	J21	4489-00701002	PIN JACK, MLT
843	J22	4489-00701002	PIN JACK, MLT
868	JL707	4242-R0404101	JUMPER LEAD
871	JL711	4242-R0406161	JUMPER LEAD
873	LCN723	4163-0125020	CONNECTOR W/W
053A	LCN3	4132-R0100161	CORD, 2C G
867		2240-Z031	HOLDER
866		2240-Z061	HOLDER

PCB-8 RECORD OUTPUT P.C. BOARD (SUB)

		MISCELLANEOUS	
802	SW755	4431-S0605510	PUSH SWITCH
802	SW756	4431-S0605510	PUSH SWITCH
802	SW757	4431-S0605510	PUSH SWITCH
802	SW758	4431-S0605510	PUSH SWITCH
802	SW759	4431-S0605510	PUSH SWITCH
882	LCN713	4163-01404006	CONNECTOR W/W

PCB-9 RECORD OUTPUT P.C. BOARD (MAIN)

		MISCELLANEOUS	
803	SW750	4431-S0604510	PUSH SWITCH
803	SW751	4431-S0604510	PUSH SWITCH
803	SW752	4431-S0604510	PUSH SWITCH
803	SW753	4431-S0604510	PUSH SWITCH
803	SW754	4431-S0604510	PUSH SWITCH
914	LCN712	4161-01404006	CORD W/PLUG

PCB-10 MINI JACK P.C. BOARD

		RESISTORS	
705	R29	5135-102522	RES, CBN 1/2P 1K
705	R30	5135-102522	RES, CBN 1/2P 1K
		MISCELLANEOUS	
824	J2	4451-00177	JACK, 1P

PCB-11 POWER INDICATOR P.C. BOARD

		CAPACITOR	
410	C863	5345-106C0951	CAP, MINI ELE 10μ/16V
		DIODE	
399	D856	5637-GL5HY10	LED
392	D857	5637-GL5EG21	LED
		MISCELLANEOUS	
398	RU801	6143-00101	RECEIVER UNIT
806	SW801	4431-A027192	PUSH SWITCH
881	LCN708	4163-01408005	CONNECTOR, W/W
880	LCN709	4163-01405004	CONNECTOR, W/W

Ser. No.	Ref. No.	Part No.	Description

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE	: Electrolytic
CAP, CER	: Ceramic
CAP, PPP	: Polypropylene
CAP, MYL	: Mylar
CAP, MCA	: Mica
CAP, MINI BP	: Bipolar
CAP, ELE BP	: Electrolytic Bipolar
CAP, STY	: Polystyrene Film
CAP, SPE	: Special
CAP, TAN	: Tantalum
470μ	: 470μF
6800p	: 6800pF
.047μ	: 0.047μF

RESISTORS

RES, CBN 1/6P	: Carbon 1/6W
RES, FUSE	: Fuse
RES, CEM 5P	: Cement 5W
RES, MTL 1P	: Metal 1W
2.2K	: 2.2kΩ
220	: 220Ω

TRANSISTORS

XISTOR	: Transistor
FET	: Field Effect Transistor

CONTROLS

RES, V CBN	: Variable Carbon Resistor
RES, SEMI FIX	: Semi-fixed Resistor

CHASSIS MISCELLANEOUS

788	⚠T1	5584-701554	XFORMER, POWER UA
788A	⚠T1	5584-702453	XFORMER, POWER G
788B	⚠T1	5584-703453	XFORMER, POWER N
837	⚠P1	4161-71151	CORD W/PLUG, POWER CORD UA
837A	⚠P1	4161-7256	CORD W/PLUG, POWER CORD G
837B	⚠P1	4161-00401192	CORD W/PLUG, POWER CORD N
834	⚠SO1	4474-221	SOCKET, AC OUTLET UA N
835	⚠SO2	4474-222	SOCKET, AC OUTLET UA N
041A	⚠SW101	4411-102729	ROTARY SWITCH, VOLTAGE SELECTOR G

PACKAGE PARTS LIST

021A	1756-06303	LABEL, 220V/50Hz G
021B	1756-03113	LABEL N
022A	1756-03108	LABEL, INT G
022B	1241-PB	POLYETHY BAG, WARRANTY N
024A	1119-026	ATTACH SHEET, FTZ SHEET G
105	1111-J90195	OWNER GUIDE, UL UA N
106	1111-J30277	OWNER GUIDE, OG
106A	1111-J30278	OWNER GUIDE, OG G
106B	1111-J2037	OWNER GUIDE, OG N
107	1113-717005	OWNER CARD, REPLY CARD UA
107B	1113-OC	OWNER CARD, REPLY CARD N
108	1119-057	ATTACH SHEET, WARANTY
108B	1116-GC	GUARANT CARD, WARANTY
109	1119-0137	ATTACH SHEET, SERVICE GUIDE
111	1241-C12732	POLYETHY BAG, OG
116	1756-CSA	LABEL, CSA
120	1221-727199	CARTON BOX
121	1222-7309	CUSHION, R
122	1222-7310	CUSHION, L
123	1223-11748	SOFT SHEET, SET
125	1241-C1491	POLYETHY BAG, SET
127	1241-C1216	POLYETHY BAG, ACCESSORY
128	1223-11751	SOFT SHEET
839	4442-14	PIN PLUG, SHORT PIN
846	6142-02601	CONT BLOCK, COMANDER
848	4191-0355	BATTER, DRY
905	4161-71174	CORD W/PLUG

NOTE

⚠ SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.